THE ARCHITECT & BUILDING NEWS

14 APRIL 1955 · VOL. 207 · NO. 15 · ONE SHILLING WEEKLY

- **PRIMARY SCHOOL, KIDDERMINSTER**
- **DOORS: II**
- **CURRENT MEASURED RATES**

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STEEL **ROLLING SHUTTERS**

The illustration shows a Mather & Platt hand-operated Steel Rolling Shutter, one of several installed for a Company in Bombay.

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396

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Tony Littlewood keeps hard at it

This, you might say, is Tony Littlewood* (our East and West Ridings Area Manager) getting the architect's point of view. He sees before him vast expanses of colourful Wallspan Curtain Walling, acres of Aluminium Windows, interminable rows of Roften Toilet Cubicles . . .

Or this, you might say more truthfully, is Tony Littlewood, Yorkshireman, doing what comes naturally to a Yorkshireman —watching cricket. A rare occasion these days! Mr. Littlewood, who has been in windows since leaving school, is deceptively amusing and casual. But when he talks windows or Wallspan or Aluminex it is worthwhile listening. And, make no mistake, his team of representatives, draughtsmen, estimators and fixers give (like Mr. Littlewood) quite first class service.

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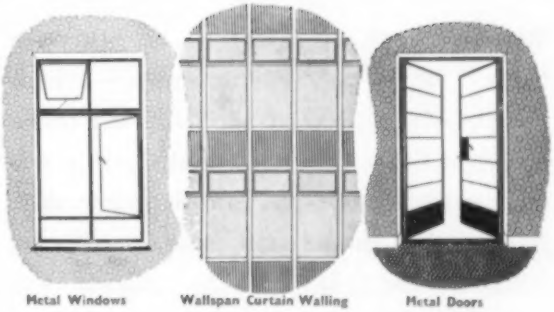
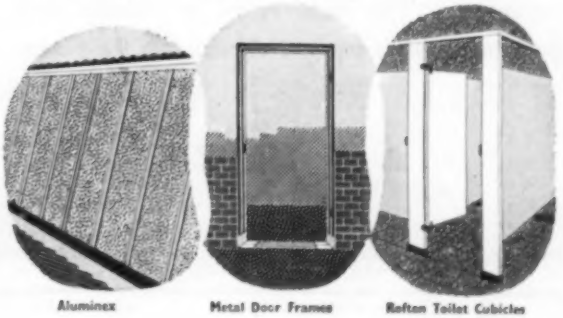


Metal Windows | Wallspan Curtain Walling | Metal Doors



Aluminex | Metal Door Frames | Roften Toilet Cubicles

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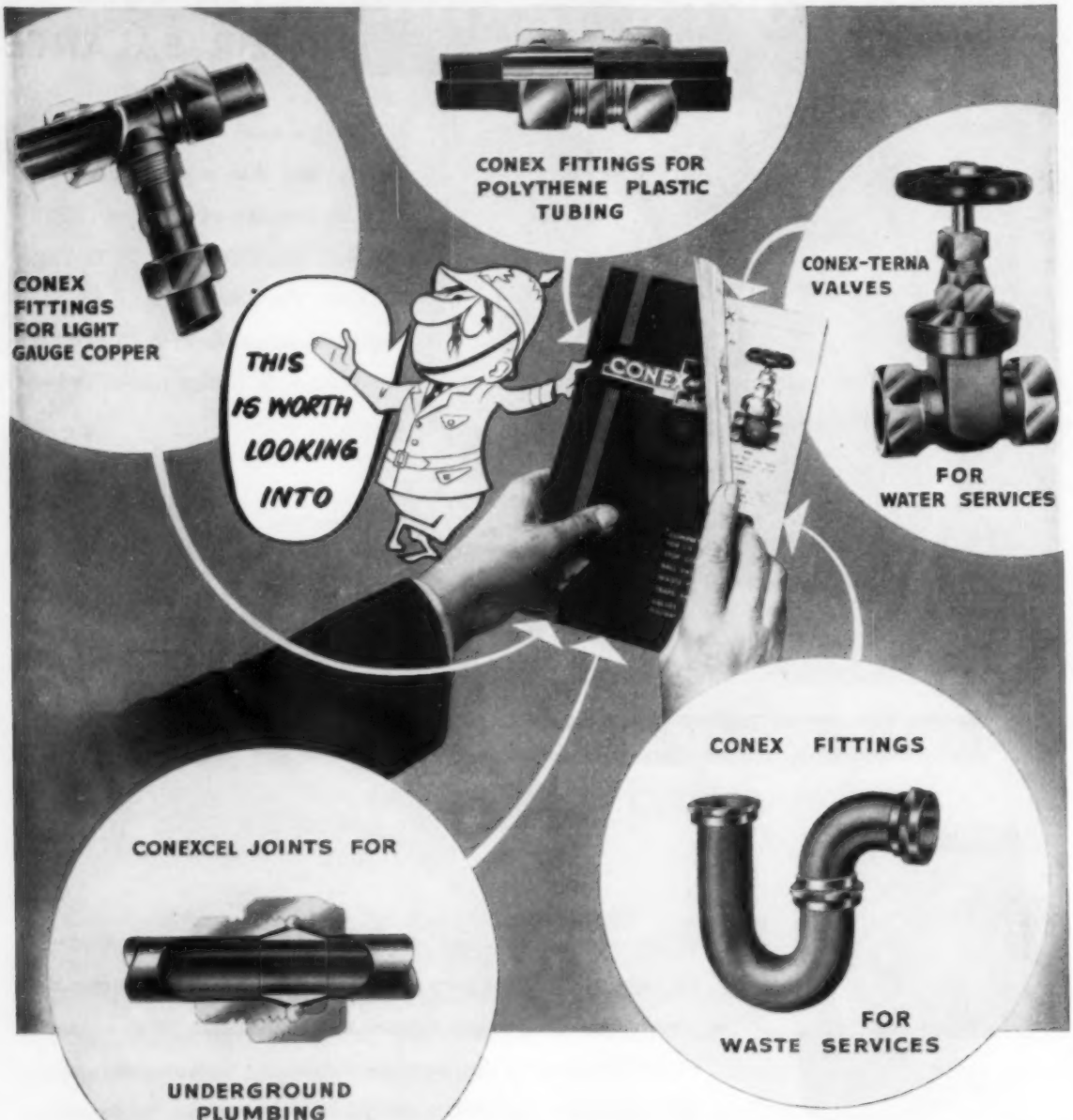

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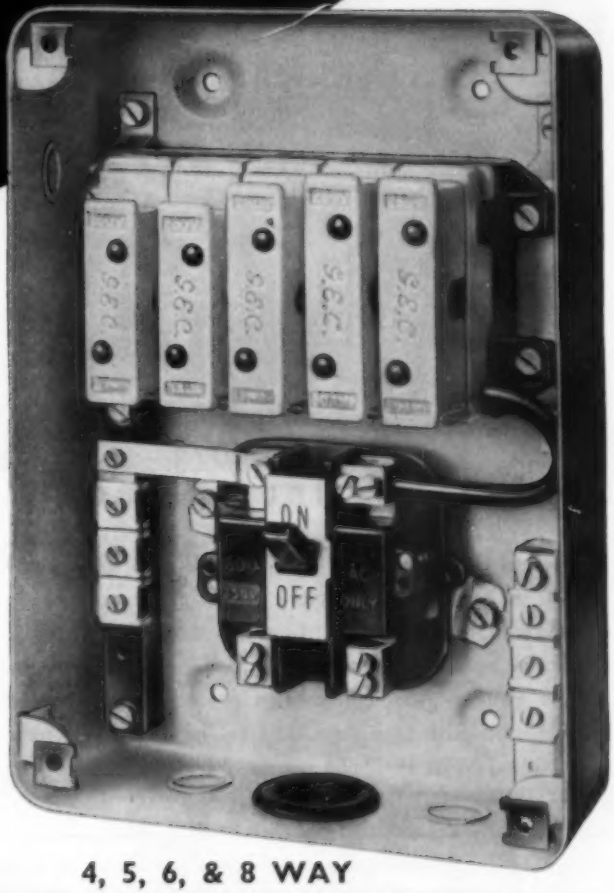

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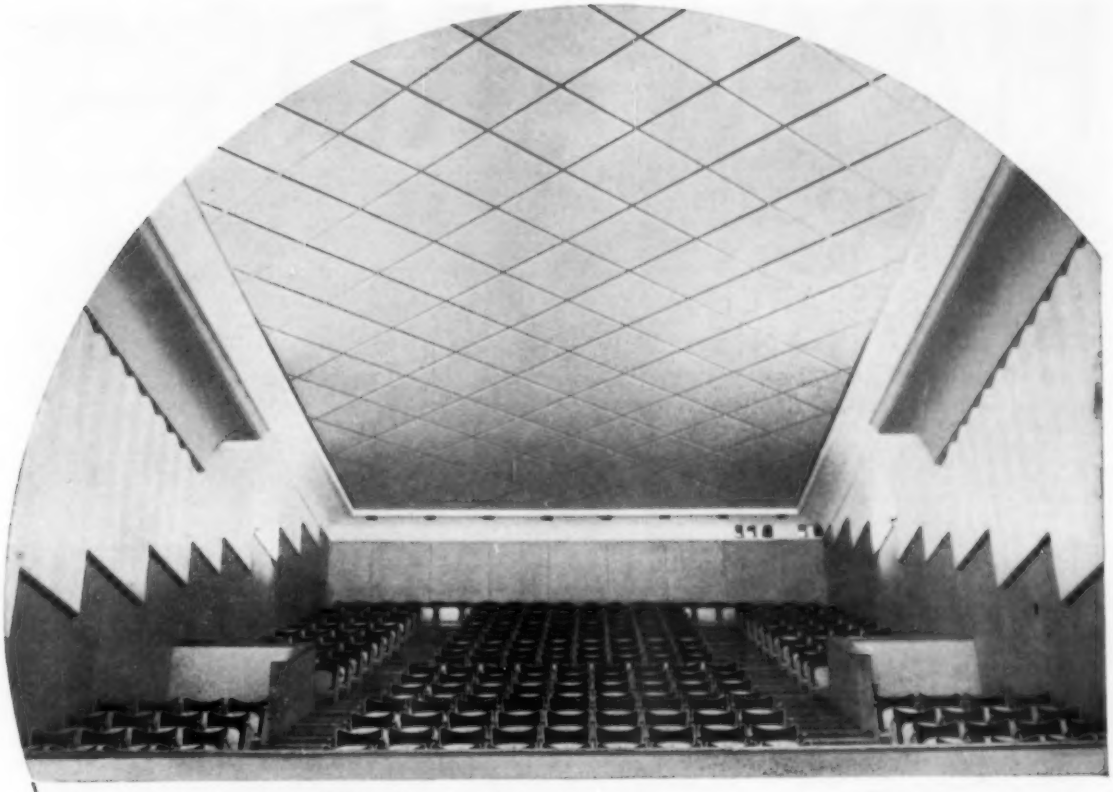

The illustration shows the use of "Glinex" in a cinema in Antwerp.

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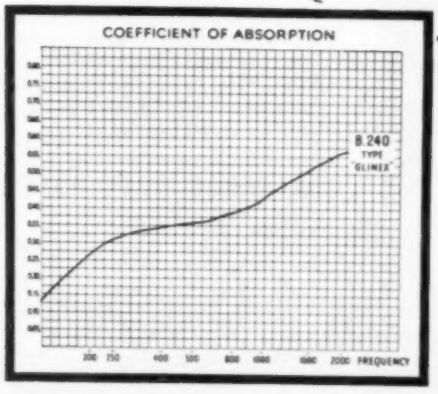

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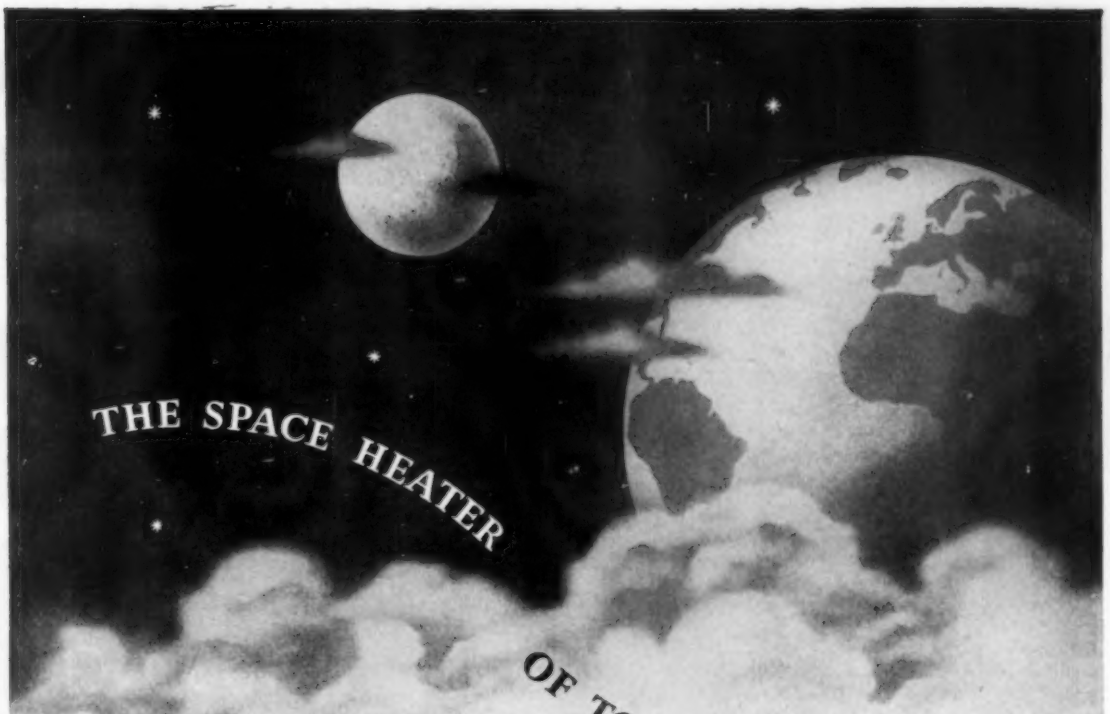

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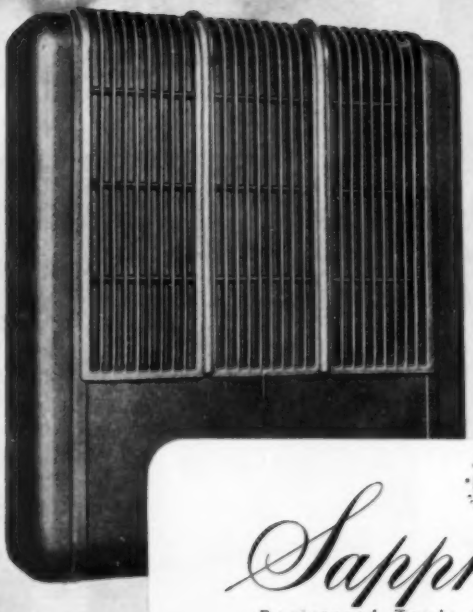

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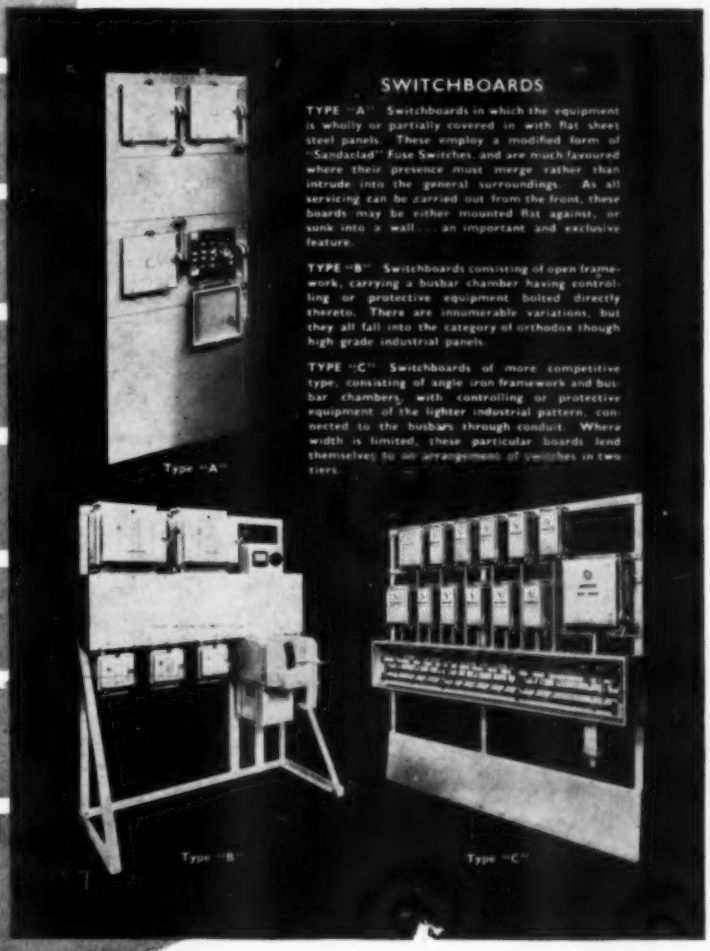
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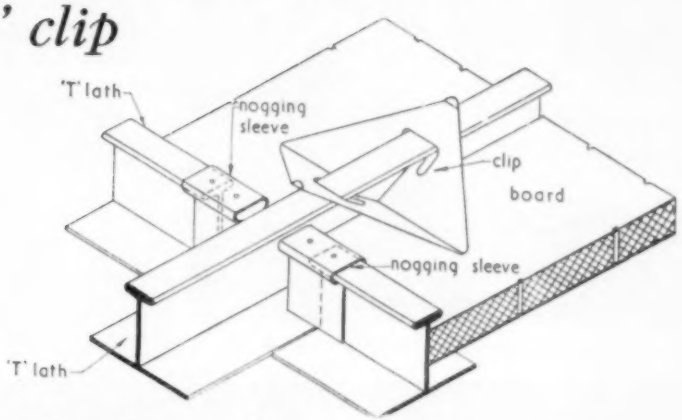
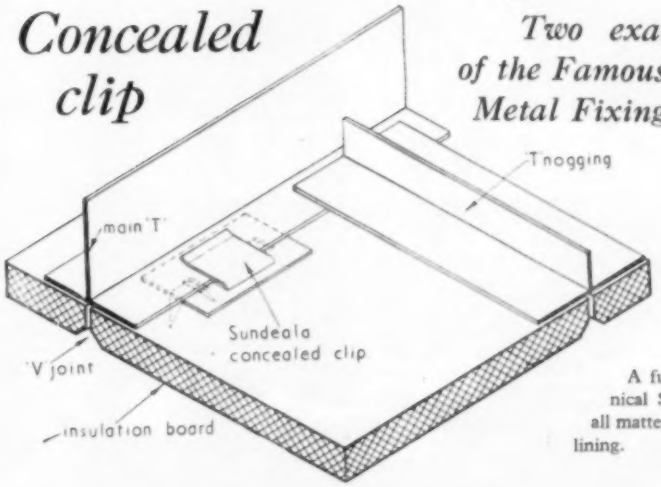
METAL FIXING SYSTEMS

'V' clip



Concealed clip

Two examples of the Famous Sundeala Metal Fixing Systems



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A long corridor.

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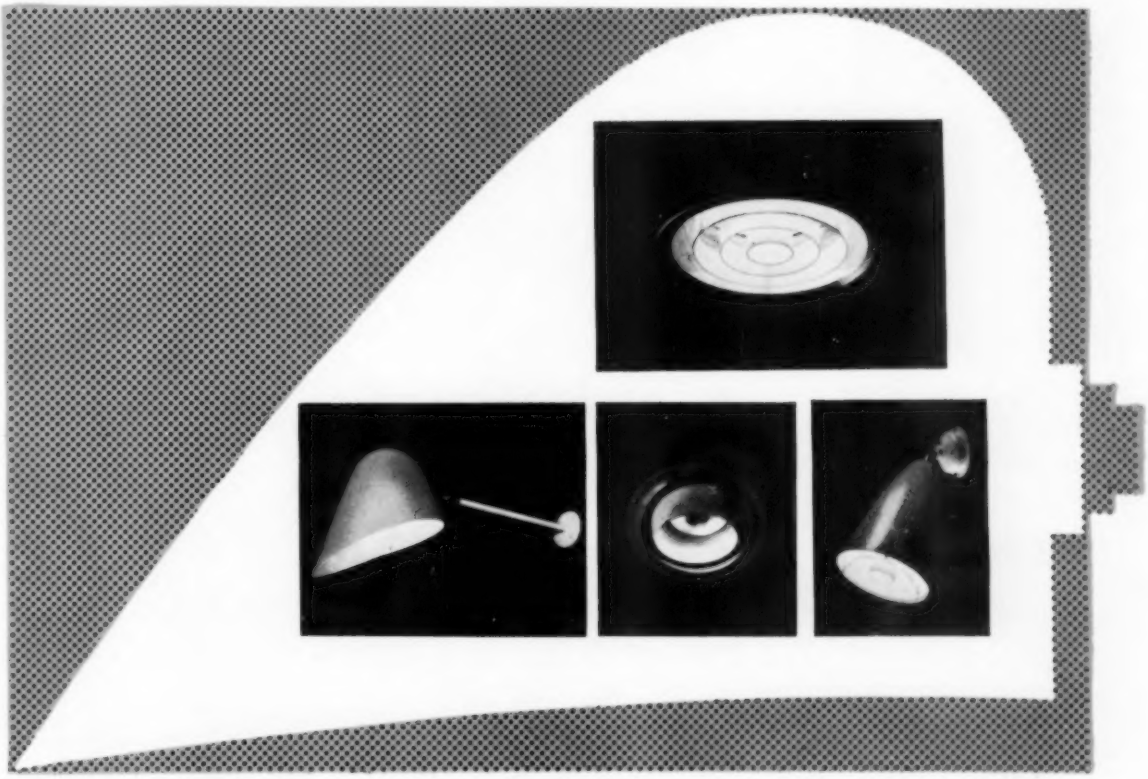

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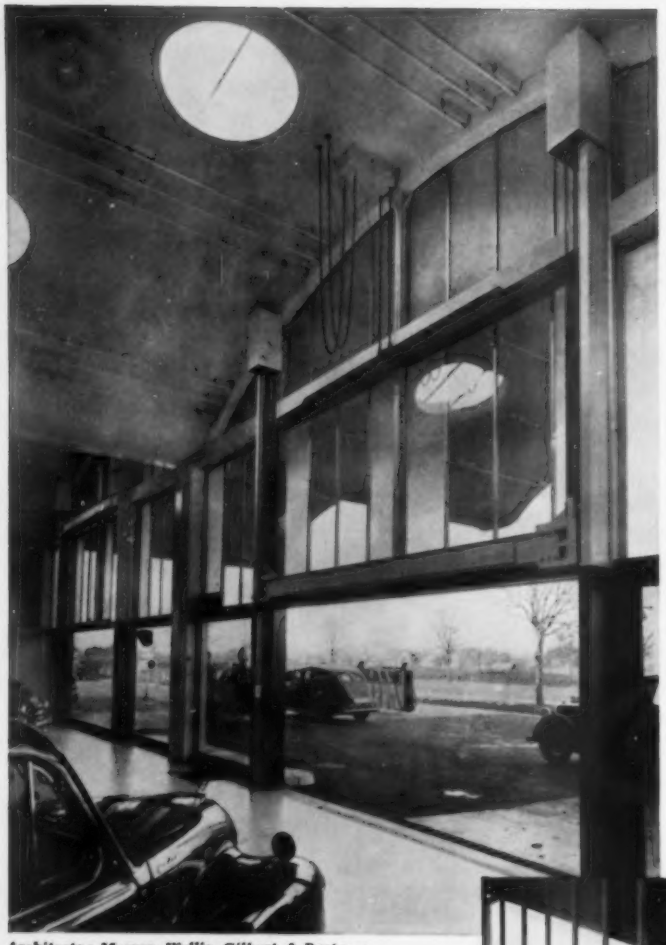

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Data Sheet A.S.2 gives fixing and other details for steel framed multi-storey buildings where distances between beams necessitate subsidiary grids for panel suspension. Data Sheet A.S.3 is related to a 40-inch planning module. Write for your copies.

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Architects: Architects Co-Partnership

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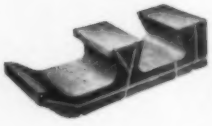
FINLOCK  GUTTERS LTD.

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Vol. 207 No. 15

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14 April 1955

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THE BIG THREE

CONGRATULATIONS to Sir William Holford on his appointment as architect-townplanner for the St. Paul's area scheme. The Report of the Improvements and Town Planning Committee presented to the Court of Common Council on the 31st ultimo brings out the important views expressed by the Minister about building in the Precinct as defined by him and his approval of the suggested commissioning of Sir William Holford to prepare a scheme for the surroundings of the Cathedral. The fact that the Minister has himself suggested the setting up of a committee of three—the Minister, the Chairman of the L.C.C. Town Planning Committee and of the City's Improvements and Town Planning Committee—to give Sir William guidance on the general principles to which he should have regard shows the importance attached to what Sir William will recommend. The decision on the final design still of course rests, as Parliament decreed in 1947, with the two authorities represented on this Committee of Three and in default of agreement between them, by the Third member—the Minister.

Twelve months has been allotted to Sir William to prepare his scheme for the City Council in consultation with the Big Three which may be extended when the situation is reviewed in nine months as from April 1, 1955. Such then is the new approach to reach finality in deciding the future of the Cathedral's setting " as one of the Nation's most valuable heritages " such as would be likely to " commend itself not only to the public generally, but also to the many authorities (including the Ministry of Housing and Local Government) who have an interest in a part of the City where planning proposals are likely to be subjected to a considerable measure of scrutiny and appraisal." The scheme will undoubtedly command a great deal of interest both here and overseas.

Sir William has a fine opportunity to produce a scheme truly contemporary with our era which he can do if only he will forget the detailed proposals of his joint 1947 Report to the City Council and refuse to allow pecuniary influences or historicism to cast a shroud upon the shape of his design, as happened 250 years ago. The hints from the Minister leave ample scope and do not bind the designer to the boundaries of Paternoster Row nor do the City Council's terms of reference, which demand " the preservation (or creation) of views of the Cathedral . . .", bind him to any other street boundary to obtain a worthy setting. Is it too much to hope, therefore, for some fairly extensive park setting such as was put forward in plan No. 3 in this journal's issue of 31.3.55 to preserve and create important views while providing much needed recreation space for city workers? This park setting could have buildings of a contemporary order projecting into it, limited in height and scale to say that of St. Augustine's Church to contrast with that of the Cathedral while the surrounding building areas could be penetrated with " lungs " of open space projecting out from the Precinct itself to preserve and create the important views of the Cathedral. It would be particularly unfortunate if an adequate set back of buildings with appropriate height restrictions on the south side of Cannon Street, at least as far as Bread Street, was not made.

The problem of the immediate vicinity is not, however, the only one to be solved. There is St. Paul's in the more general picture seen in silhouette from more distant parts. There are the skyscraper schemes such as the Barbican Scheme and the tall new Bucklersbury House which will strike fresh silhouettes upon the skyline of the City. It is the bulk as well as the heights of such schemes which will make their mark. One cannot consider these schemes in isolation—St. Paul's Precinct, The Barbican and important individual new buildings—for they are part of a general pattern of scenic views. This aspect has received no special mention yet a model of the City as a whole is just as important a need as for a part. The St. Paul's Precinct Scheme should be prepared together with one for improvements generally in the City.

EVENTS AND COMMENTS

THE NEWSPAPER STRIKE

As I write there seems to be little hope of a settlement of the strike which is preventing the printing of national newspapers. Underground trains look very odd with rows of people with nothing to do but stare at each other. The superior expressions of regular *Manchester Guardian* readers are even more noticeable now. Those who can read French or American buy *Le Figaro* or the *New York Herald Tribune* at Gloucester Road Station. The streets are noticeably cleaner, but what of the wretched paper-seller? Many have disappeared from their pitches, some sell duplicated sheets of racing results. All the same the streets are tidier without them and that brings me to my point. Should we not have a system of newspaper kiosks as they have in other countries? Our climate is ill suited to standing in the open with a pile of newspapers supported on a couple of soap boxes. It is certainly a British tradition to do so but is it a very sensible one? The magazine merchant who spreads his wares far and wide is even more in need of tidying up. His sort seems to be on the increase and at busy points he is often a hindrance to pedestrian traffic and might with advantage more frequently be moved on.

THE LIVERPOOL COMPETITION

Quite a number of people have written to the *Liverpool Daily Post* about Sir Giles Scott's award. Almost all deplore the loss of St. Luke's tower which, I think rightly, is claimed to be very good of its kind and a great deal better than the one in the winning design. Professor Gardner-Medwin wrote that much as he admired Sir Giles his appointment as lone assessor must have indicated to many first-class architects that contemporary design was taboo and that only designs which involved a compromise with neo-Georgian or neo-Gothic would be acceptable—at least, for *first* prize. He went on to say that it was surprisingly common for conservative assessors to award *second* prize to a revolutionary scheme.

Another correspondent considered that in allowing competitors to decide whether St. Luke's tower should be kept or pulled down, the conditions were ambiguous and blamed the R.I.B.A. He was in favour of pulling down the tower and thought that the assessor had made the best of a bad job.

ANOTHER EXHIBITION

The First International Exhibition, Building and Public Works Materials and Equipment Exhibition, is billed to take place at Saint Cloud, outside Paris, from June 25 to July 10 this year. The exhibition is being organized by a private company, Formes et Techniques, of 29 rue Cambon, Paris. The brochure of the exhibition considers that the various national building exhibitions are all right in their way but that the time has come for comparisons at international level. This is felt to be of real importance to everyone in the industry and to the public as well.

Stands of light construction will be grouped in the various sections of the building industry, and there will be, in addition, a "live" housing exhibition of examples from different countries. A separate section will contain official exhibits, technical press stands and propaganda. The usual exhibition services will also be provided in pleasant surroundings.

My feeling about international exhibitions is that as long as they concern prestige only they are likely to be fun, but once they become sources of information displayed in such a way that one feels one simply must stop and look they become unutterably boring, bad for morale, and produce that dull pain in the stomach which is inseparable from international cooking. There is already in this country far too much building information. No one man could ever know half of it, and it is all vital. What is needed above all else is an un-exhibition in the form of a publication which tells you all the things you need not worry about. One of these, I suggest, is the First International Building Exhibition—unless you need an excuse to visit Paris—and that is not at all a bad idea.

BUILDING FOR CHILDREN

I have received from a reader in Capetown a long and interesting description of a well designed box of bricks and building units for children. It is believed to be about 25 years old and of Swiss origin. It appears to be a post and panel system based on a module and therefore follows the very latest practice. The posts are of wood and the panels of some form of stiff card. The pieces are brightly coloured and the toy has proved a great attraction with visiting architects.

Unfortunately the manufacturer's name and the original box are missing.

NEW LONDON GARAGE

I hear that Selfridges are to build a 700-car garage over part of the rear of their store. Access will be from Duke Street and there will be five floors for parking. Goods traffic for the store will be dealt with in the basement. Drawings have been submitted to the L.C.C. and it is hoped to start work on August 1. The new building will be operated by Lex Garages.

A PLEA FROM THE WHEELED CHAIR

A friend of mine, an astonishingly agile wheeled-chair operator, has drawn my attention to the very small number of shops, hotels, clubs and so on which can be entered without ascending at least one step, some have a whole flight. My friend, full of ingenuity, propels himself to the back door of such premises in the hope of finding a ramp, or a service lift. He is not always successful. He points out that we are an ageing nation and may expect to have more wheeled chairs about, not all of which will be propelled by athletes. Every building should have ramped access somewhere, he thinks, and I agree.

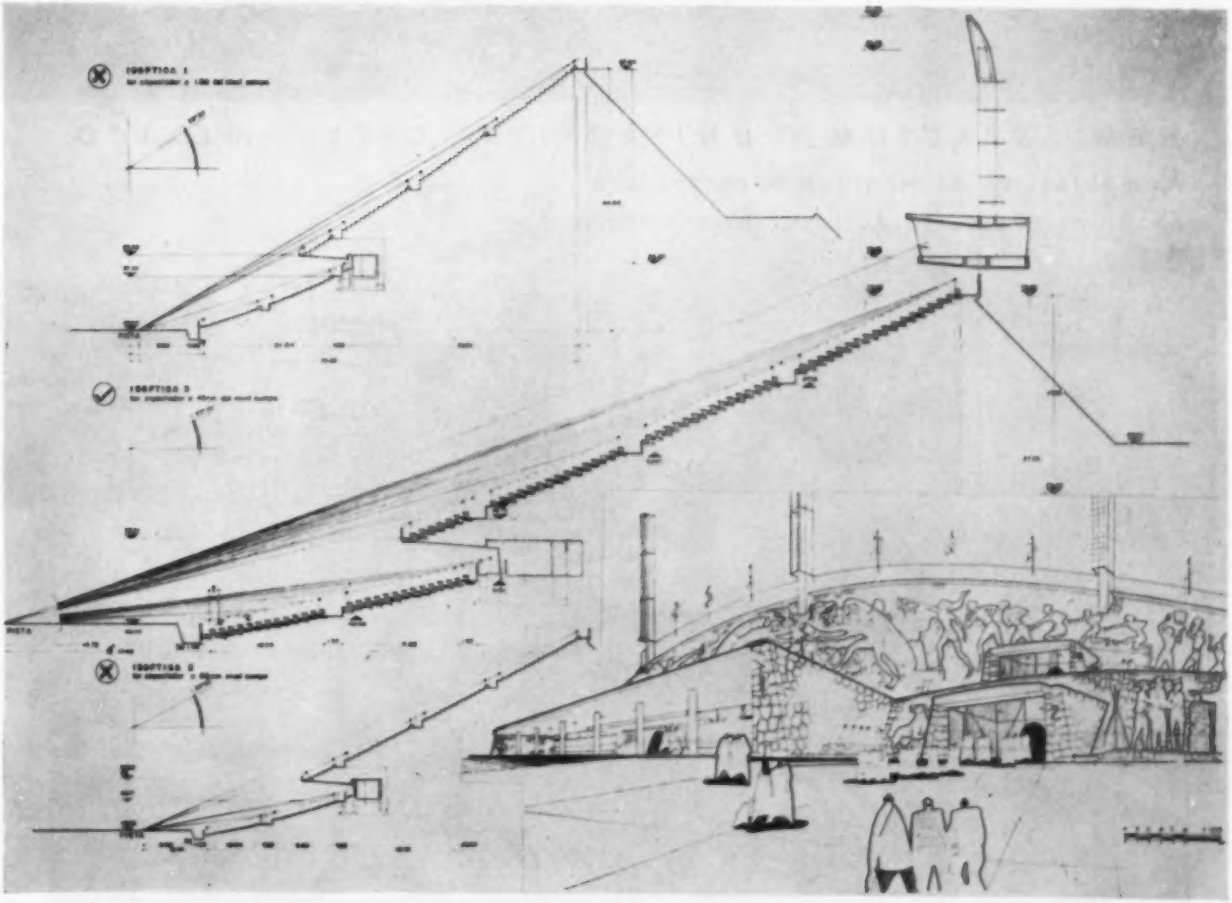
MEXICAN ARCHITECTURE

Pity the poor organizer of exhibitions from abroad, particularly from those countries where to-morrow or the day after will do. My stop press news is that the Mexican exhibition, billed to open at the R.I.B.A. to-day, will not arrive for another week. I would not dare to forecast its actual opening day, but at the present rate it will only have a week at Portland Place. It is hoped to give it a further ten days at the Building Centre, but nothing is fixed. Meanwhile the telephone lines to Mexico buzz.

ABNER

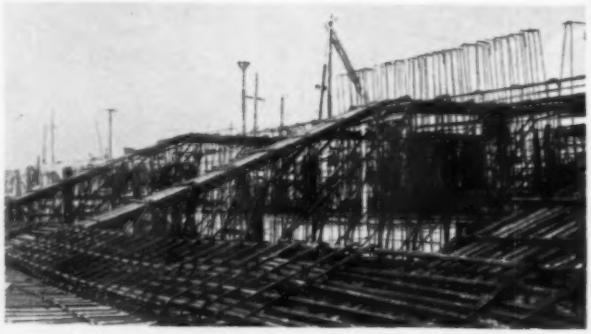
STADIUM, UNIVERSITY CITY, MEXICO

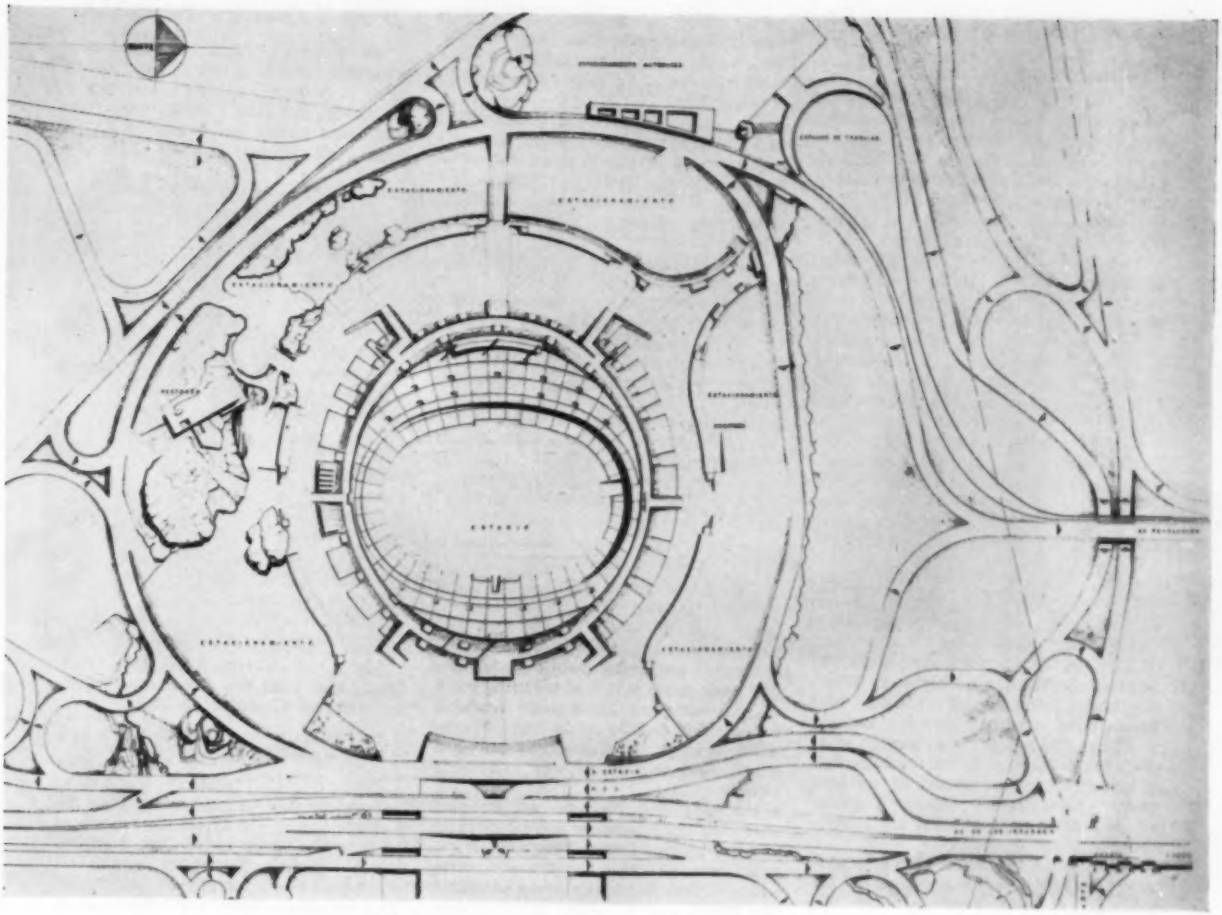
Above: A group, with the architect A. P. Palacios in the centre and the famous Mexican painter Diego Rivera on the right, with his symbol of prehistoric culture in the background. Below: Sections through the stadium with angles of vision and an inserted perspective showing Rivera's mural decoration.



NEW STADIUM, UNIVERSITY CITY, MEXICO

An exhibition of Mexican Architecture opens at the R.I.B.A. later this month





ARCHITECT: AUGUSTO PALACIOS

Parts of the exterior have been decorated by Diego Rivera. Note traffic direction arrows on plan

In Parliament

Problems in Brick

Mr. Dodds asked the Minister of Works what practical application had been made of the successful experiments at the Building Research Station, Garston, Hertfordshire, of producing good quality bricks from 85 per cent pulverized fuel ash waste at power stations and 15 per cent clay.

Mr. Birch told him that the large scale application of the results of these experiments raised technical and economic problems which the brickmakers were considering. Some brickmakers were now using a small proportion of fly ash in their regular production. Mr. Dodds asked him if he was optimistic about the future of the proposal, to which Mr. Birch answered that it was not an easy matter. It was not economic to transport fly ash any great distance. There had to be suitable clay and fly ash close together. The matter raised a lot of problems (March 29).

Historic Buildings Lists

Mr. Fleetwood-Hesketh asked the Minister of Housing and Local Government for what number of districts in the six northern counties of Northumberland, Cumberland, Westmorland, Durham, Yorkshire, and Lancashire, statutory lists for historic buildings had not yet been issued; what proportion this was to the total number of districts in these counties; and how many investigators were working whole-time or part-time for his department in these counties.

Mr. Sandys informed him to statutory lists had not yet been issued for 150, or 41 per cent, of the 366 administrative areas in the six northern counties. At present one investigator was working whole-time in this area. (March 29)

Harlow Expenditure

Mr. Graeme Finlay asked the Minister of Housing and Local Government if he would state the total expenditure on housing, highways, sewerage, water and all other ancillary services in the new town of Harlow since October, 1951.

Mr. Sandys explained that information was not available in this precise form. The published accounts of the Harlow Development Corporation showed that since April 1, 1952, the corporation had received advances from the Exchequer totalling £13,827,000. (March 29)

Seven Protests

The Minister of Housing and Local Government stated in answer to Mr. Albert Evans that up to March 28 seven local authorities had complained to him about the higher housing costs resulting from the recent increase in interest charges. (March 29)

Swedish Timber Houses

Mr. Spence asked the Secretary of State for Scotland what complaints he had received of excessive deterioration taking place in the fabric of Swedish timber houses in Scotland, and how far these complaints were general or were confined to specific areas or to specific consignments.

Mr. James Stuart said that he had had no such complaints. Some apparent deterioration of the external fabric of houses in one county, reported last year, was found to be superficial weathering having no deleterious effects.

Mr. Spence asked whether the maintenance costs of the houses were higher or lower, on average, than those of similar houses of traditional construction. Mr. Stuart told him the complete information on which to base an accurate comparison was not available. A sample investigation suggested, however, that the cost of maintaining Swedish timber houses might be somewhat higher than for traditional houses, mainly because of the desirability of treating them with wood preservative periodically. (March 29)

Conversion to Oil

The Minister of Fuel and Power, questioned about aspects of fuel policy, said that he was discussing with Government Departments, nationalized industries and other public authorities how they could save coal by using more oil. Government loans were available to industialists who could make worthwhile savings by changing from coal to oil, and use of oil was increasing rapidly.

He gave Mr. Nabarro an estimate that coal consumption might increase another four or five million tons in the next year, said the Government were taking action in various ways to bridge the likely gap between requirements and home supplies. Among these various ways which Mr. Nabarro had mentioned was oil-for-coal substitution. Mr. Robens, taking up this point, asked if the Minister had considered extending the industrial loans scheme—in view of the heavy capital expenditure involved—to domestic consumers who wished to change over to oil. He suggested that there might be many domestic consumers who would change over but for the heavy capital cost. The Minister said this extension had not been considered, but he described it as a useful suggestion. (March 28)

Housing Progress—February

The number of permanent houses completed in Great Britain during February was 23,345 compared with 19,786 in February, 1954.

In the first two months of 1955, 44,312 permanent houses were completed compared with 44,381 in the same period of 1954.

Wage Increases

The wage increases recently agreed by the National Joint Council of the Building Industry come into force on April 18. The increases are 9s 2d for craftsmen and 5s 6d for labourers for a 44-hour week.

Yale University Fellowship

Mr. Peter A. Page, who graduated with first-class Honours in the Department of Architecture, the University of Sheffield, in June 1954, has been awarded a Henry Fellowship of £1,000 tenable for one year in Yale University, U.S.A.

Henry Fellowships are awarded by a Committee of Management consisting of six Trustees, three from Oxford University and three from Cambridge University.

Candidates for these Fellowships must be either graduates of a University in the British Isles or graduates of a British Dominion University studying at the time of application at a University in the British Isles.

APPOINTMENTS

Mr. H. H. Matthews, L.R.I.B.A., has been appointed Architect, Chief Civil Engineer's Department, British Railways (London Midland Region).

Mr. C. W. Sully, A.R.I.B.A., A.A. Dipl., has been appointed Chief Architect to the Granada Theatres, Limited. He has been Chief Architect of Ilford Limited for the past 17 years.

Mr. D. J. Sharp, A.R.I.B.A., A.A. Dipl., also joins the Architectural Department of Granada Theatres.

CHANGE OF ADDRESS

Edward D. Mills, F.R.I.B.A., announces that he has moved both his Carlisle Street and Greek Street offices to new and more convenient premises at 15, Carlisle Street, to which all communications should be addressed. The telephone numbers remain as at present—Gerrard 8305/6 and Gerrard 4923.

Messrs. Sanderson & Bruckland (Peter Sanderson, A.R.I.B.A., John Bruckland, A.R.I.B.A.) have changed their address from 30, Gerrard Street, London, W.1, to 58, Grafton Way, London, W.1. Telephone Euston 3732/3.

COMING EVENTS

The Royal Institution of Chartered Surveyors

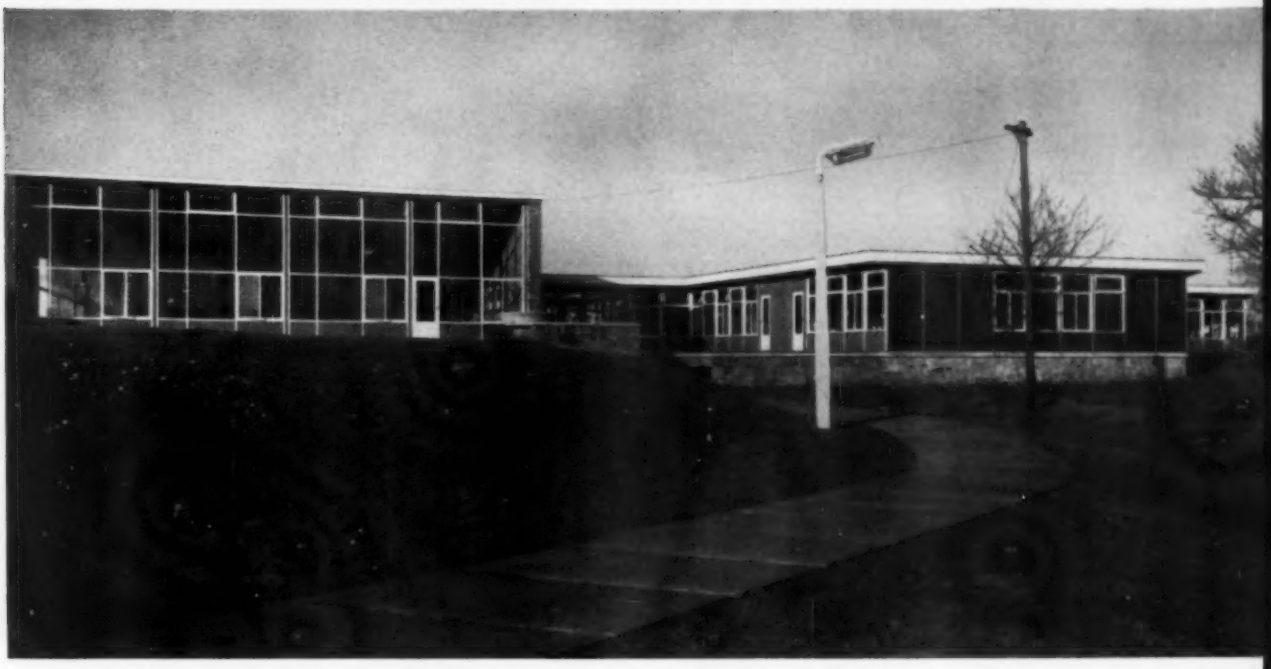
April 20 at 6 p.m. General Meeting of Quantity Surveyors. Three Danish surveyors, H/rs. Aage Christensen, Erling Frederiksen and Bjorn Bindslev, Fellows of The Association of Danish Architects, will speak on "The Building industry in Denmark."

Institute of Landscape Architects

April 21 at 6.15 p.m. Talk on "The Parking Problem in Town and Country," by Lieut. Col. C. D. Buchanan, B.Sc., A.M.I.C.E., A.R.I.B.A. M.T.P.I., at The Housing Centre.

Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects, Bedfordshire Branch

April 21. Branch Annual General Meeting.



The school from main entrance

BIRCHEN COPPICE INFANTS' SCHOOL, Kidderminster

architects: YORKE, ROSENBERG & MARDALL

associate architect: T. R. EVANS, A.R.I.B.A. *assistant architect:* J. G. FRYMAN, A.R.I.B.A

site supervision: J. SOFAER. *consulting engineers:* CLARKE, NICHOLLS & MARCEL, *structural*
OSCAR FABER & PARTNERS, *services*

BUILT as second stage of a two-form entry Primary School; this infants' stage is for 240 children.

Originally when sketch plans were made for the whole school, the dining-room was to be in two halves, one for juniors and one for infants. The first half was built for the Juniors, and opened in September, 1952. The Infants' Department was in the 1953 programme, and by this time economies made it necessary for the children to dine in the Assembly Hall.

This was the governing factor in planning, as the Assembly Hall had to be linked to the existing Junior dining-room.

In planning the classroom block, the architect was asked to create separate two-class units, so that children of the same age would have a self-contained group with its own sanitary accommodation and play space.

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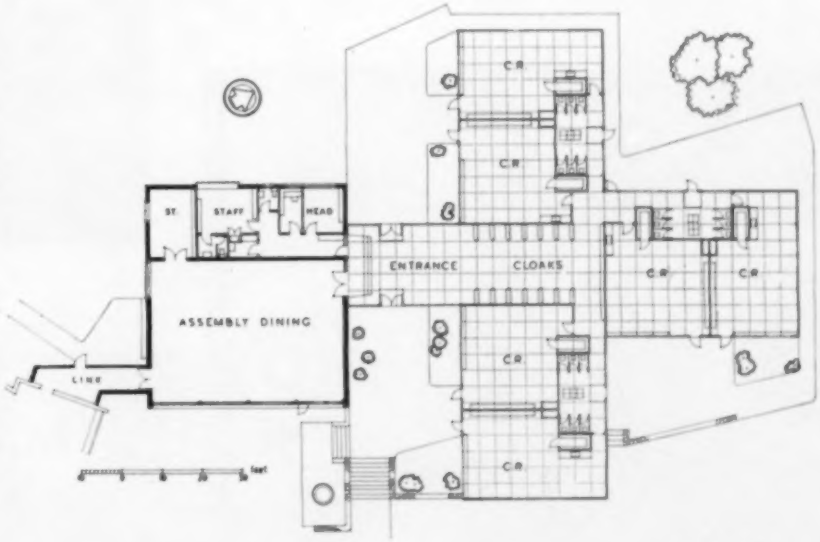
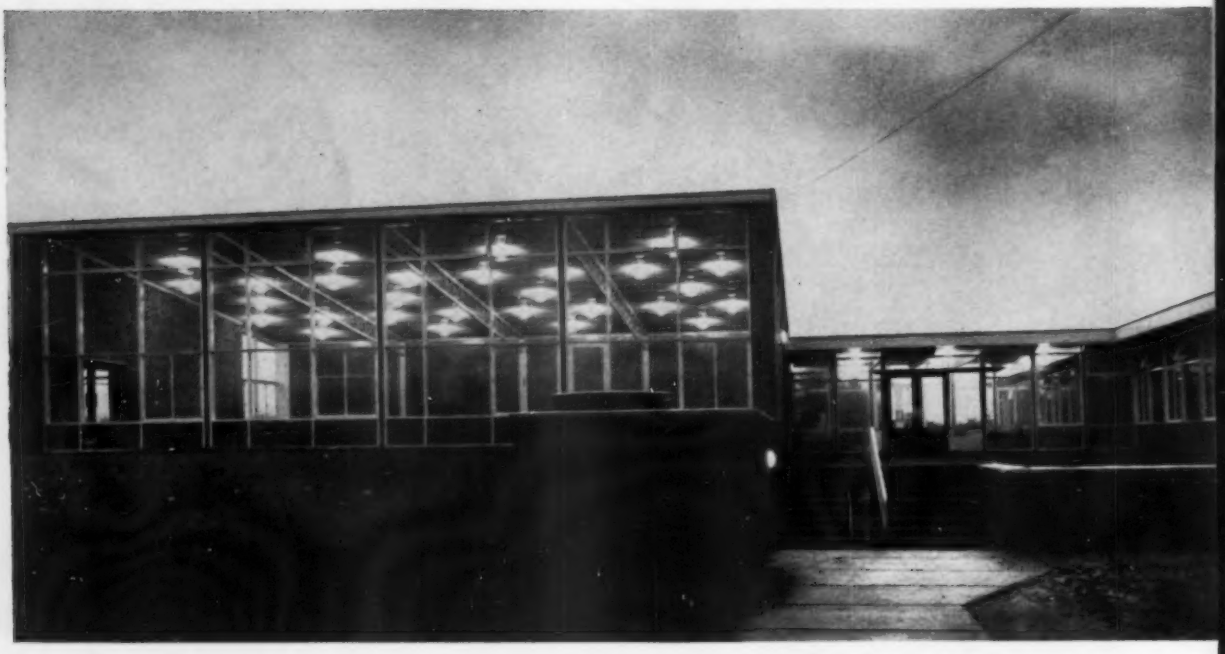


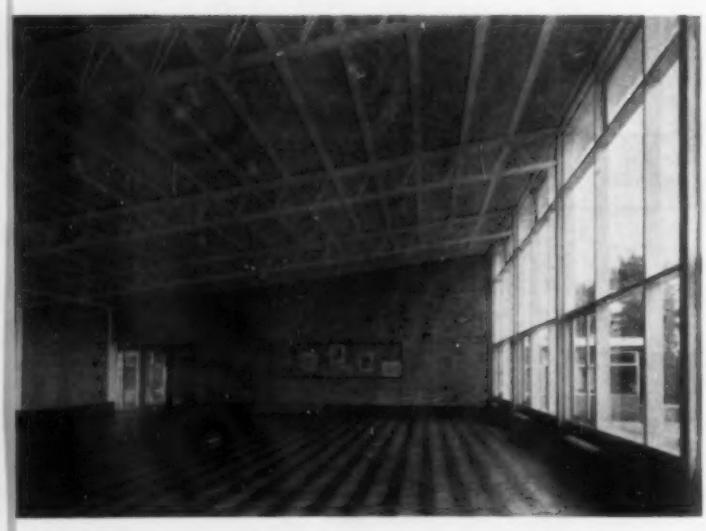
PLAN



Assembly-dining hall on left; main entrance right.

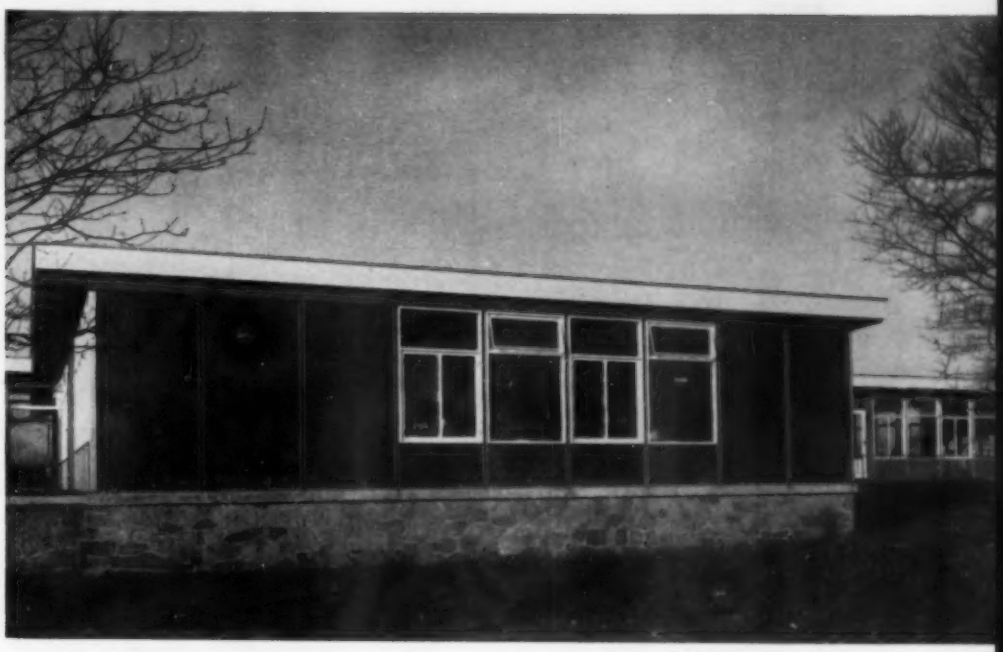
Infants' School, Kidderminster

Entrance hall, showing way through to Staff rooms (right) and assembly hall (left)

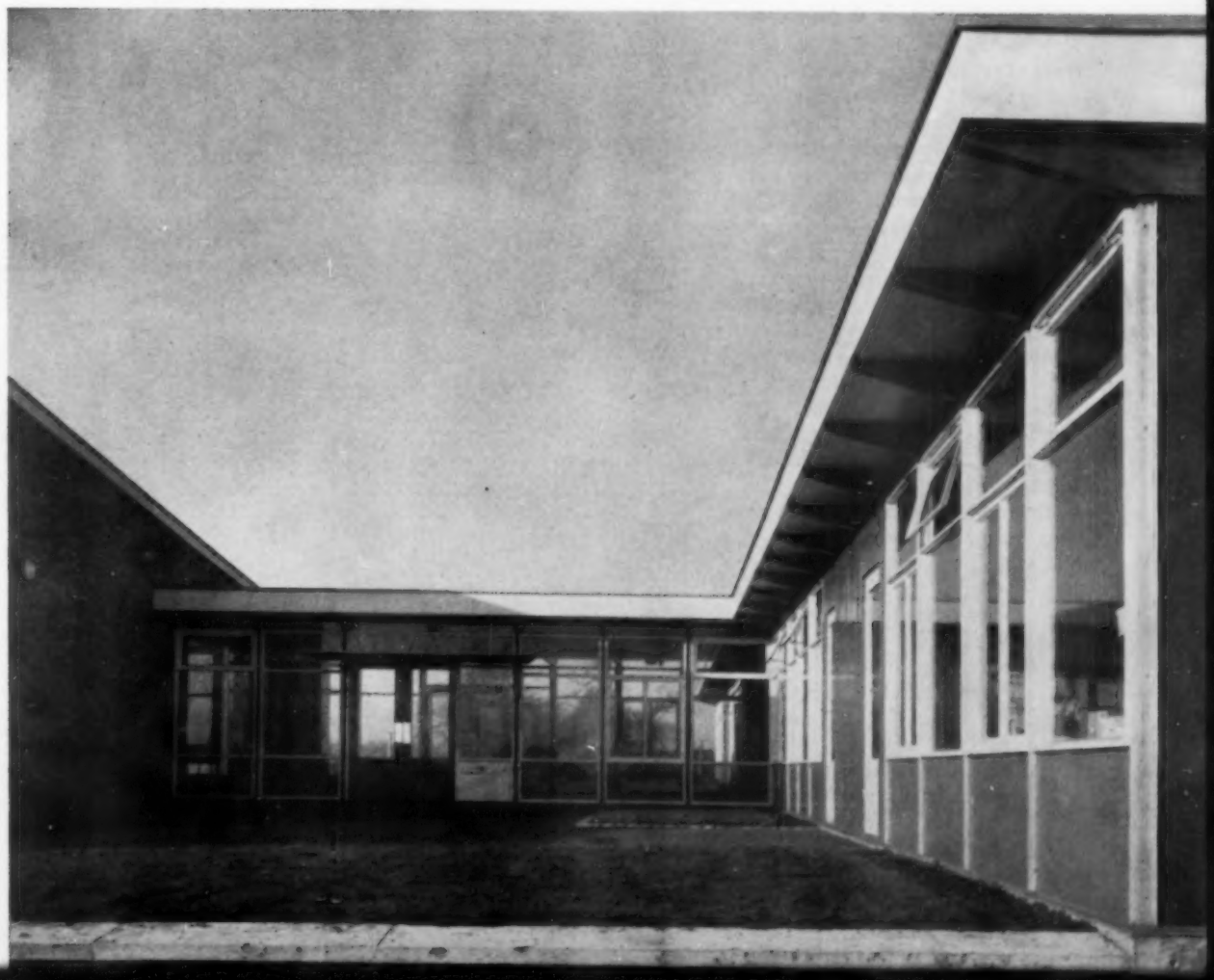


Detail view of main entrance and classroom in Holoplast construction

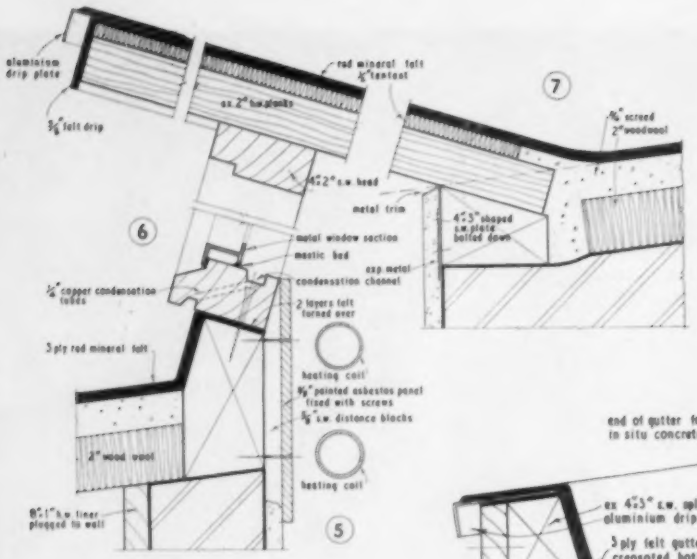
Assembly-dining interior

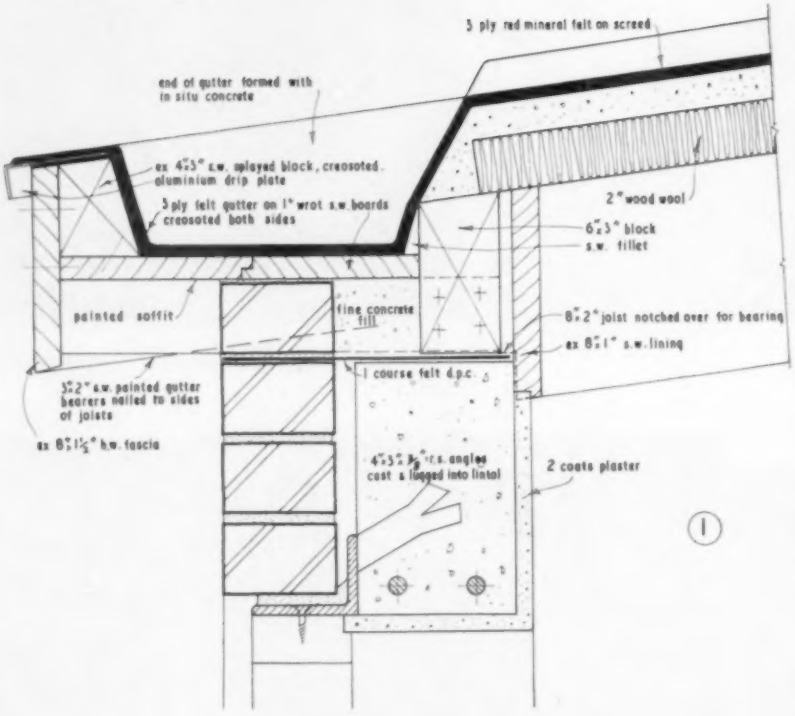


Classroom from east, the same classroom as below



Infants' School, Kidderminster




3 ply red mineral felt on screed
end of gutter formed with in situ concrete
ex 4"x3" s.w. splayed block, creosoted
aluminium drip plate
3 ply felt gutter on 1" wrot s.w. boards creosoted both sides
2" wood wool
6"x3" block
s.w. fillet
painted soffit
fine concrete fill
8"x2" joist notched over for bearing
ex 8"x1" s.w. lining
1 course felt d.p.c.
3"x2" s.w. painted gutter bearers nailed to sides of joists
ex 8"x1½" h.w. fascia
4"x3"x⅜" r.s. angles cast & lugged into lintol
2 coats plaster
1

Continued from page 433

The cruciform plan shape resulting from this lent itself to a form of construction based on a simple grid and Holoplast was chosen as being particularly suitable both in appearance and ease of erection.

Holoplast Construction

The school is a single-storey project planned on a 4ft module. The system of construction comprises Holoplast prefabricated assemblies for both external and internal walls. The Holoplast construction is load-bearing, the roof load being carried on the internal and external Holoplast assemblies. Aluminium alloy sections form the edge members of the prefabricated Holoplast assemblies.

In the external wall construction, the prefabricated assemblies are joined by means of light alloy cleats prefixed to the extrusion edge members of each assembly. The junction is finished by inserting Holoplast cover strips between each assembly, held in position with spring steel fixings.

A light aluminium alloy weathering channel is prefixed to the base of the external assemblies and the base fixing cleat is ragbolted at each modular interval through a slate sill member into the site concrete.

External assemblies are standardized generally into all solid, part solid/

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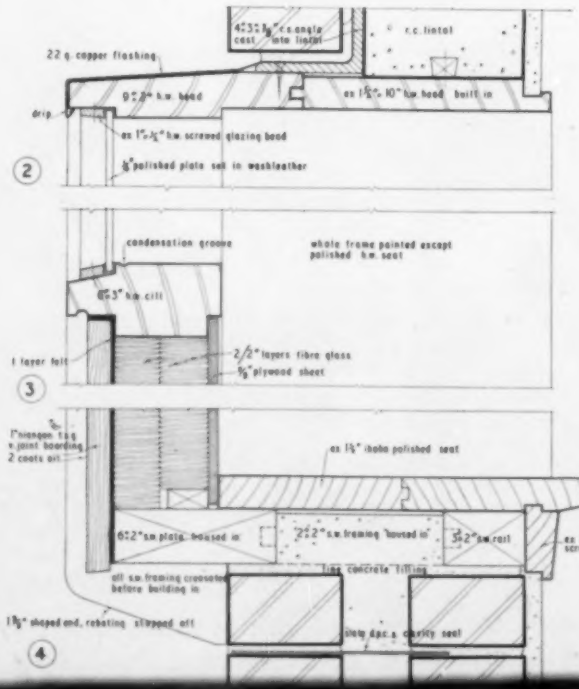
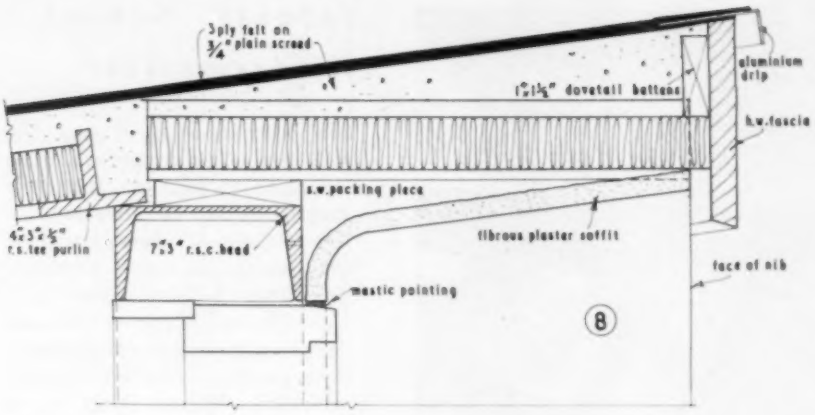
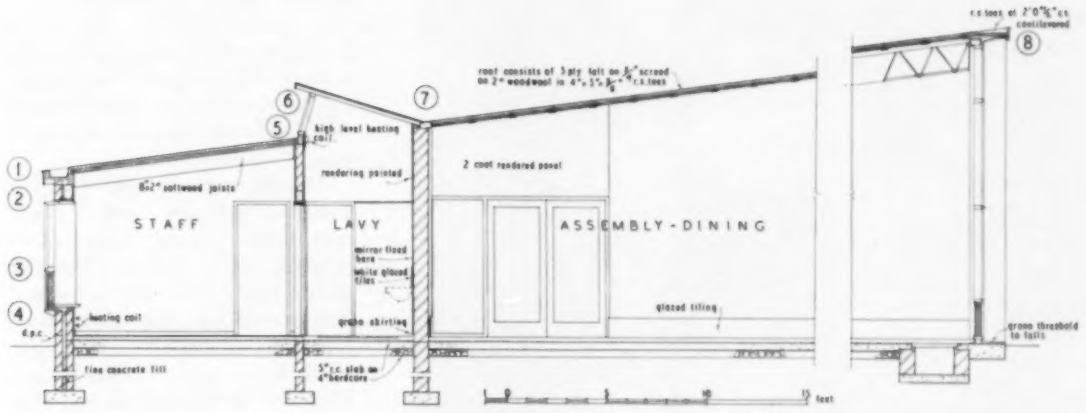

4"x3½"x⅜" r.s. angle cast into lintol
r.c. lintol
22 g. copper flashing
9"x2" h.w. head
ex 1½"x10" h.w. head built in
drip
ex 1"x½" h.w. screwed glazing bead
⅛" polished plate set in weatherleather
2
condensation groove
whole frame painted except polished h.w. seat
6"x3" h.w. cill
1 layer felt
2½" layers fibre glass
⅝" plywood sheet
3
1" hexagon t.g. v. joint boarding 2 coats oil
ex 1½" iroko polished seat
6"x2" s.w. plate bedded in
2"x2" s.w. framing housed in
3"x2" s.w. rail
ex 3"x1½" moulding screwed
off s.w. framing creosoted before building in
1⅛" sloped end, rebating stopped off
4



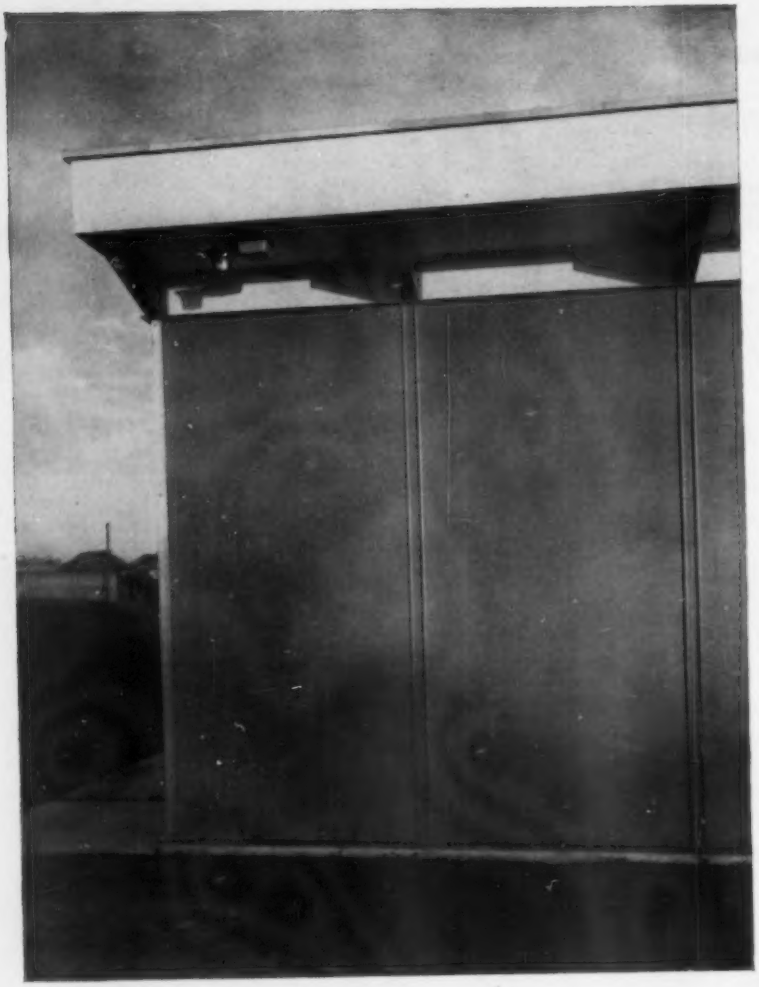
DETAILS

SCALE: ⅛ F.S.



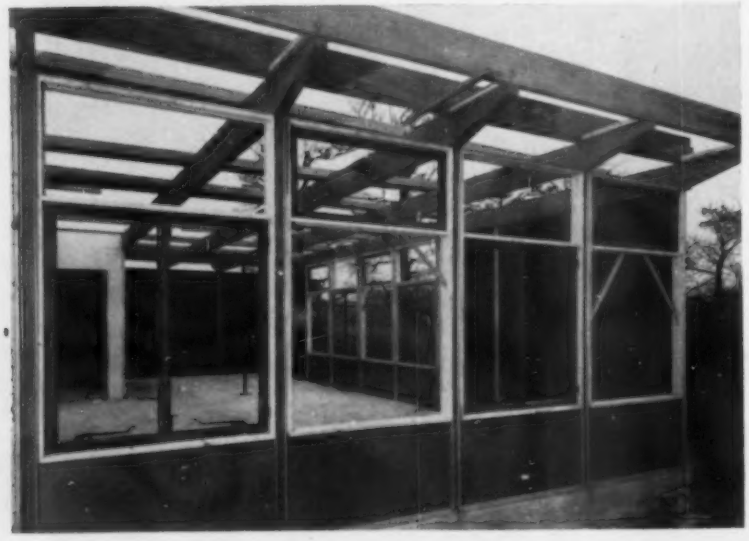
KEY SECTION FOR DETAILS

Typical classroom



Detail of Holoplast panels

Windows and roof structure assembled



Infants' School, Kidderminster

part glazed, and all glazed units. The solid parts of the assemblies are 1⅜in Holoplast structural cavitied panels, integral surface in Terra-Cotta or Natural Grey. Windows are standard steel sections in timber surrounds. The timber surrounds were incorporated in the Holoplast prefabricated assemblies and painted on completion. Fixed glazing is direct into the timber surrounds. External doors are in timber, with glazed areas as required, similarly painted on completion.

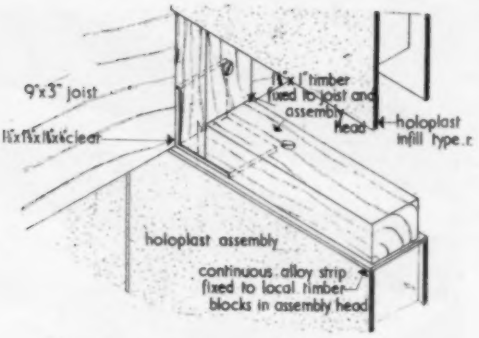
A small number of special assemblies were prefabricated to the Architect's requirements, with vertical softwood boarding on timber framing, with light alloy extruded edge members as before described.

The internal walls consist of 1⅜in Holoplast structural cavitied panels, with light extruded alloy junction members, flush with the Holoplast surface, and glazed where required. The internal walls are secured at the base with local concealed fixings direct to the floor. Internal doors are 1⅜in Holoplast in extruded alloy frames. The finish to the Holoplast internally is stove enamel applied under controlled factory conditions, in colours, to the Architect's requirements.

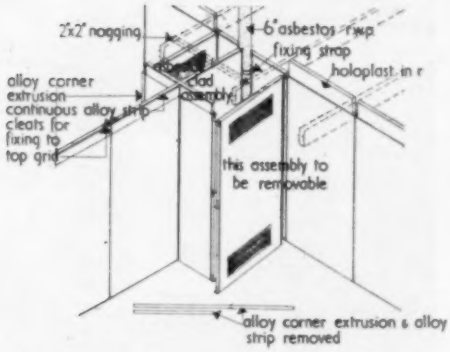
The external Holoplast assemblies have the cavities filled with mineral wool. The internal assemblies are filled with wood wool. The special external timber assemblies have an incorporated insulating membrane and are mineral wool filled between the timber framing.

The roof is a hardwood timber structure designed on the diagrid principle. The roof joists are West African mahogany, secured at the modular intervals by mild steel bolts that pass through both members of the upper and lower grid system. These bolts are used to form the fixing to the supporting walls. A continuous aluminium alloy girt member is fixed at the head of the external and internal Holoplast assemblies and screwed to the underside of the mahogany joist of the lower grid system. The upper centre joist of each

[Continued on page 441

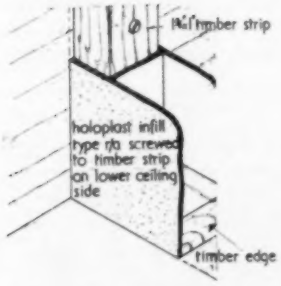

9"x3" joist
1½"x 1" timber fixed to joist and assembly
holoplast infill type .r
holoplast assembly
continuous alloy strip fixed to local timber blocks in assembly head

Change of ceiling level

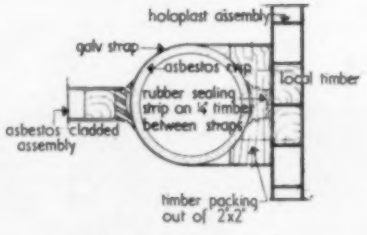

2"x2" nogging
6" asbestos cmp
fixing strap
holoplast in r
alloy corner extrusion
continuous alloy strip cleats for fixing to top grid
clad assembly
this assembly to be removable
alloy corner extrusion & alloy strip removed

Service duct

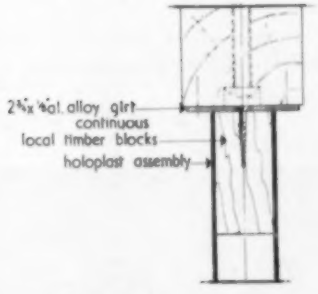
Panels during assembly



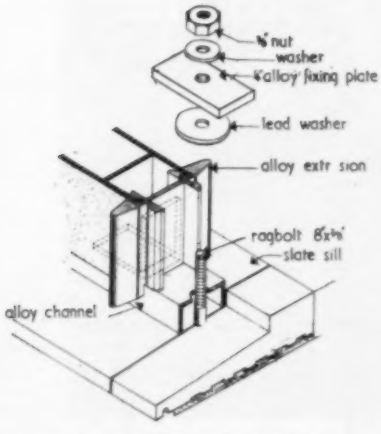
Junction of brick wall



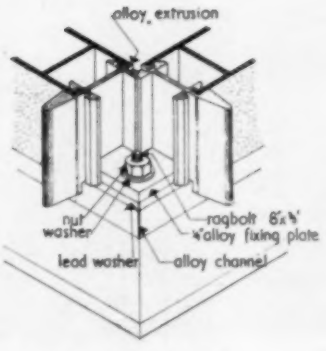
R.W.P. detail



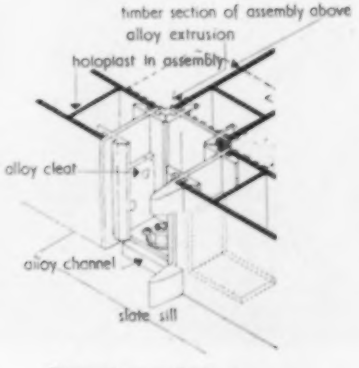
Fixing beam



Intermediate mullion



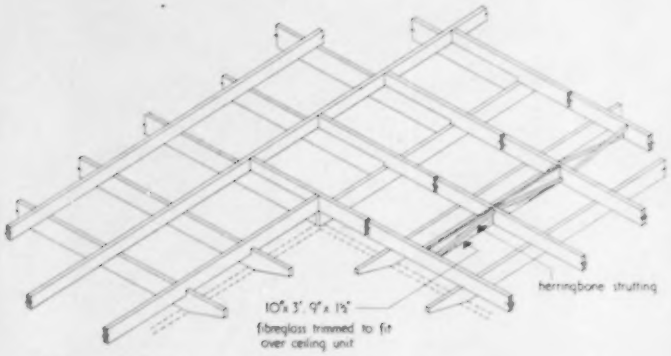
Corner detail



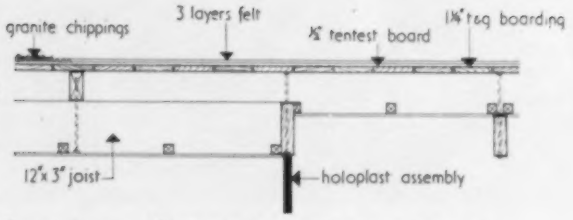
Tee junction

ROOF CONSTRUCTION

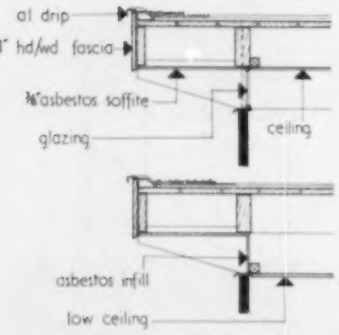
DETAILS. SCALES: 1in=3ft and ⅛in F.S.



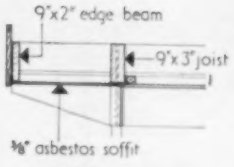
Isometric roof layout

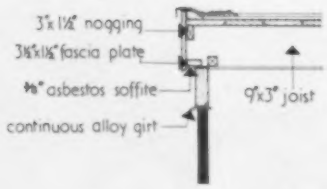


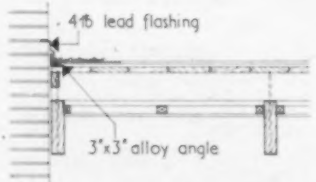
Section through cross over



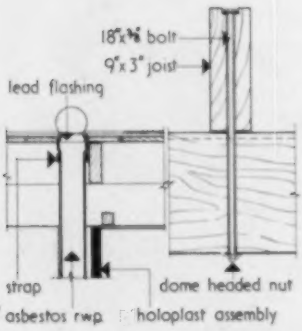
Eaves sections





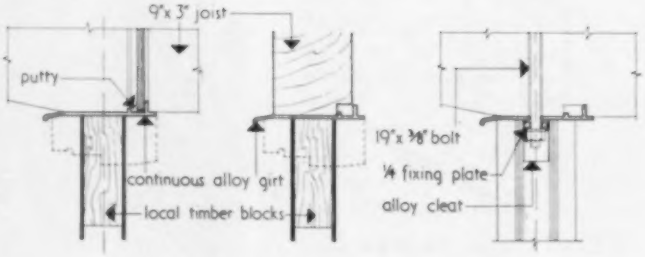


Wall junction



Detail of modular junction. Scale: ⅛ F.S.

Section through joist. Scale: 1in = 3ft.



Quantity Surveyor: Oswald Wainright
General Contractors: A. H. Guest Ltd.
Subcontractors and Suppliers:

Asphalt & Paving: Highways Construction, Ltd. *Balustrade:* C. E. Welstead, Ltd. *Cloakroom Fittings:* E. Finch & Co., Ltd. *Doors:* Gliksten Doors, Ltd. *Electrical Installation:* Midland Electricity Board. *Fibrous Plaster:* H. H. Martyn & Co., Ltd. *Floor Tiles:* Carter & Co. (London), Ltd., *Granwood Flooring:* Granwood Flooring Co., Ltd. *Heating Installation:* The Ducatt Heating Co., Ltd. *Holoplast Construction:* Holoplast, Ltd. *Ironmongery:* E. G. Roberts, Ltd. *Joinery Fittings:* Tylers (Architectural), Ltd.; Compactum, Ltd. *Metal Windows:* Williams & Williams, Ltd. *Pre-cast Concrete Copings:* Constone, Ltd. *Roofing:* Macartney, Ltd. *Sanitary Fittings:* Stiltsons Sanitary Fittings, Ltd. *Sprayed Limpet Asbestos:* Turners Asbestos Cement Co., Ltd. *Structural Steelwork:* Concrete & Structural Products, Ltd. *Wall Tiles:* R. G. Robertson (Tiles), Ltd. *Wood Block Flooring:* R. W. Brook, Ltd.

Infants' School, Kidderminster

Continued from page 438

classroom has a steel fishplate reinforcing member, 6in × ⅛in × 16ft long.

At the perimeter wall modular intervals the mild-steel bolts pass through the alloy girt member and are screwed to light-alloy cleats, prefixed to the alloy edge members of the prefabricated assemblies.

In the entrance hall and classrooms the ceiling lining is screwed to the underside of the joists of the upper grid members to expose the natural colour of the mahogany joists at the lower level.

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The roof is covered with 1½in T. and G. diagonal boarding, ½in insulation board, and three layers of bituminous roofing felt finished with granite chippings. A hardwood fascia is fixed to the joist edges around the perimeter, and the eaves soffit is of ¼in asbestos sheets, painted finish.

Assembly

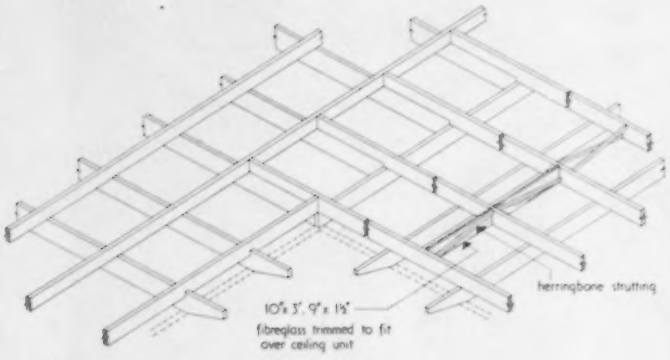
The slate sill was fixed in position around the external perimeter, the screed and Granwood floor finish laid before the Holoplast main erection commenced. The Holoplast assemblies were temporarily supported in position until the roof structure was erected ready for the head fixing to be secured.

The site was occupied by the General Contractor, A. H. Guest, Ltd., of Stourbridge, on August 1, 1953, and the school was completed by April, 1954. The Holoplast external and internal walls were erected in four weeks.

Block plan showing relationship of the Junior School to the Infants' School. The view below shows the Junior School from the south-east. From left to right are: hall, main entrance, classrooms and two-storey classrooms behind

ROOF CONSTRUCTION

DETAILS. SCALES: 1in=3ft and $\frac{1}{8}$in F.S.



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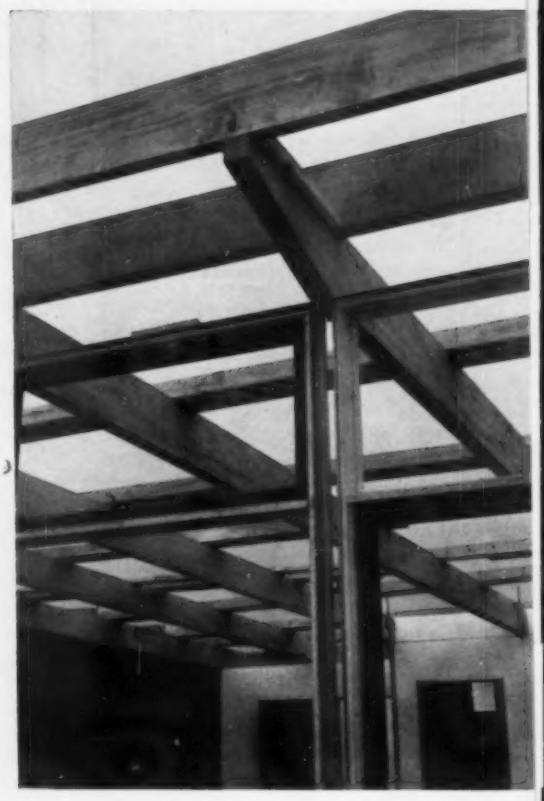

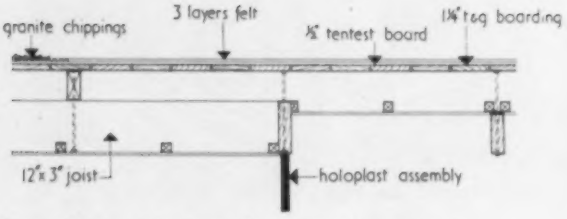

Section through cross over

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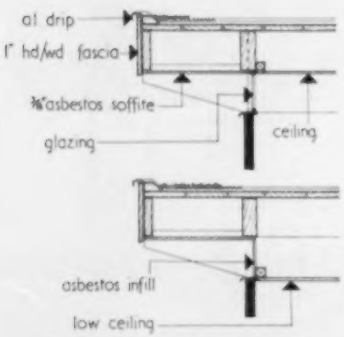
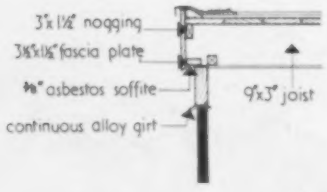
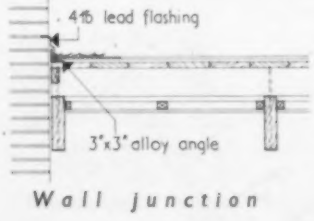
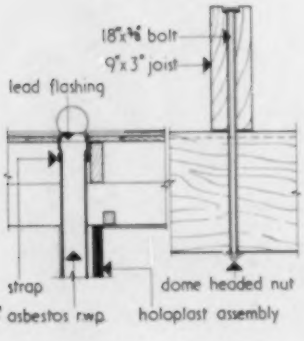


Eaves sections



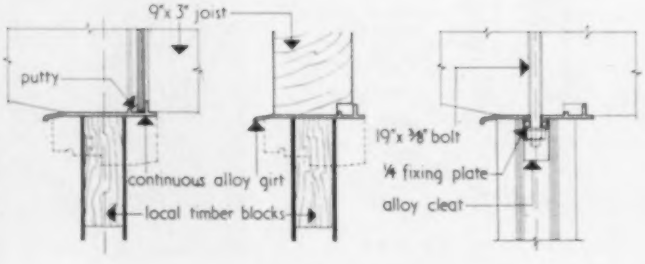


Wall junction



Detail of modular junction. Scale: $\frac{1}{8}$ F.S.

Section through joist. Scale: 1in = 3ft.



Infants' School, Kidderminster

Continued from page 438

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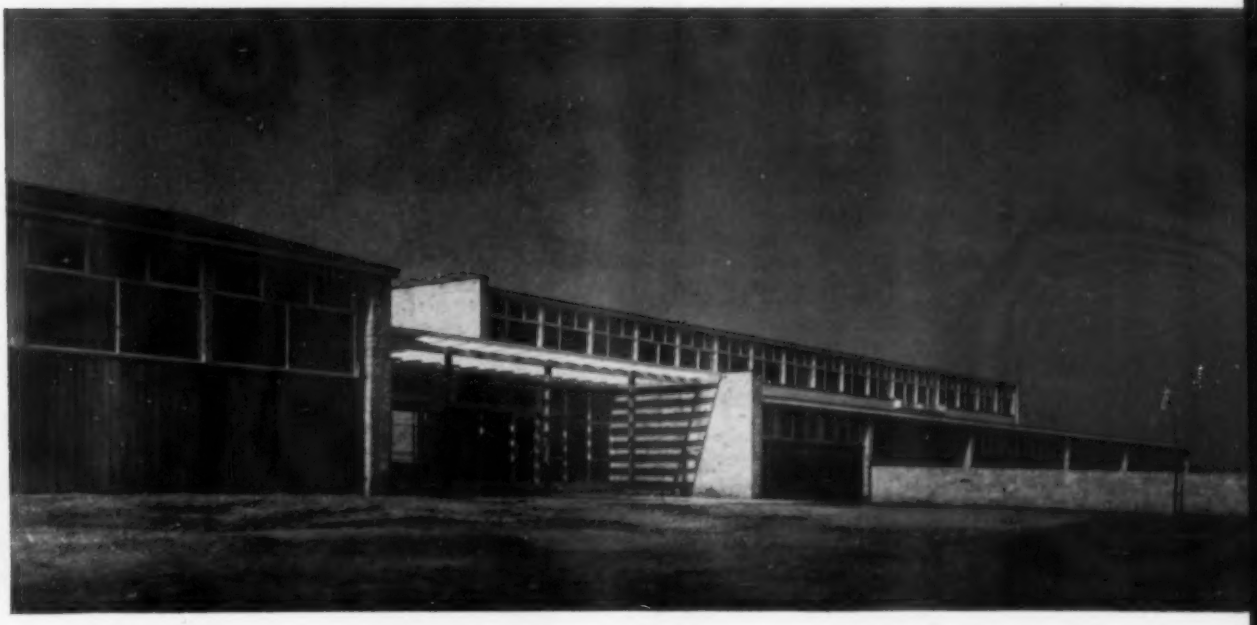


Doors-2

This is the seventh article of the series which are appearing once a month dealing with building accessories. The next article will deal with above ground drainage.

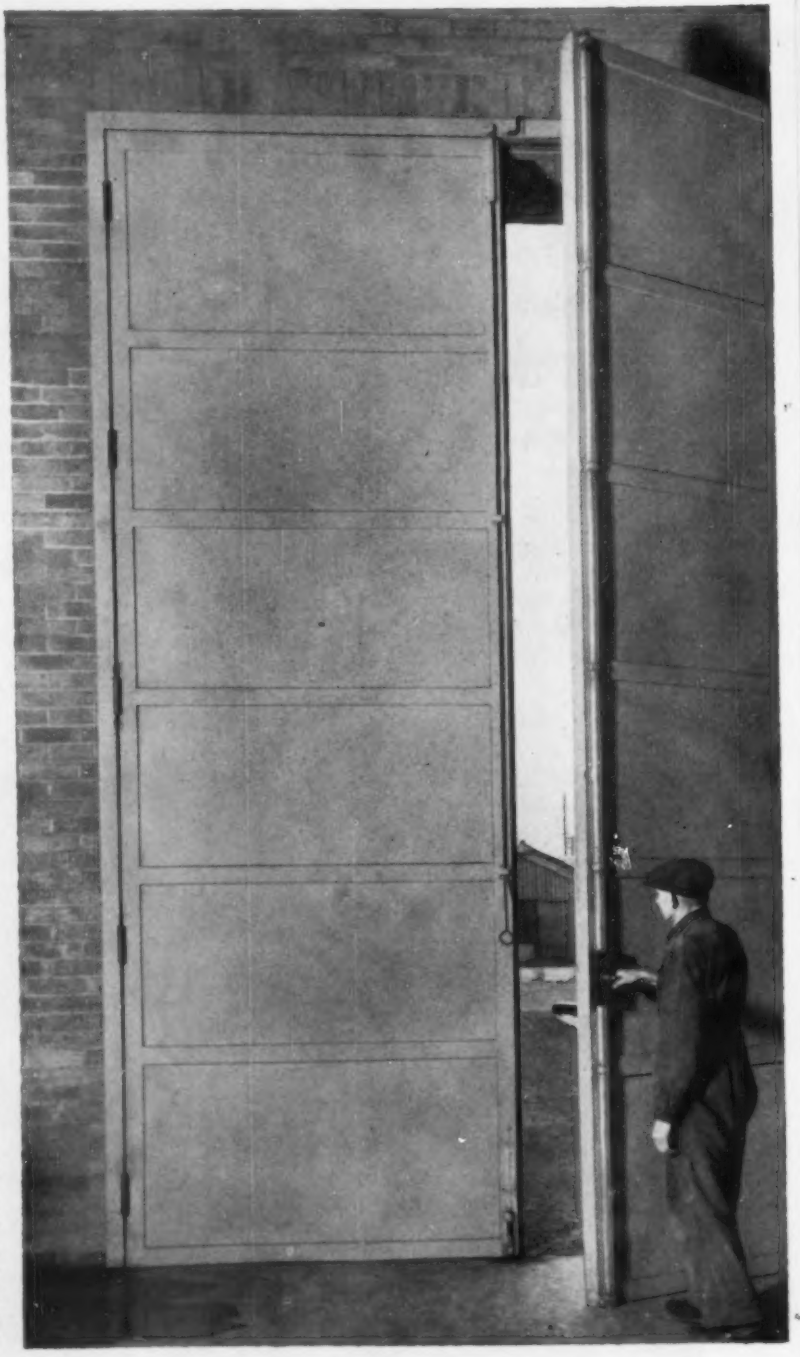
THE previous article in this series in the issue of March 3, 1955, dealt mainly with doors for normal purpose and those of the more common types. In this issue the emphasis is laid on the more special types of doors and on gearing to carry and operate certain of these types.

Plate Glass Doors

This type of door, which has only become practicable in recent years, is made to the special needs of each job. The doors need to be constructed from safety types of glass in order to meet the conditions to which doors are subjected. For reasons of safety to users it is important to fit them with hardware which draws attention to their existence. They are normally fitted by means of floor or overhead springs and pivots and are locked at the top and bottom. It is essential to consult the specialist suppliers as to their installation.

Special Design Doors

Many doors for special applications are available in addition to purpose-made doors to architects' designs. For example, many doors are made with higher sound resistance than that of normal doors. The more usual sound-resisting doors are plywood-faced flush doors with solid cores or with cores filled with materials such as slabs or granulated cork, strawboard or insulating boards. Many sound-resisting doors are considerably heavier than normal doors, a factor which should be borne in mind in relation to the number and size of the hinges on which they are hung; an adequate hanging stile of a type of timber which holds screws well is essential. Sound-resisting doors are usually at least 1¾in thick. Doors of special construction to aid sound resistance have only a limited effect unless special precautions are taken to reduce the passage of sound at the edges. A simple means of improving sound resistance is to fit a narrow rubber gasket on the frame round the four edges of the door, for which a sill needs to be provided, on which the doors close. To benefit from the cost of installations of this nature, care should be taken to insulate the frame or linings and to avoid continuity of flooring through the door opening. When still higher sound resistance is needed, two doors should be used in each opening separated from one another by an airspace and each door hung on an independent frame as doors are difficult to keep perfectly true. It is desirable to ensure a close



fit between the door and frame, especially at the locking edge, and this can be done by using a heavy type of espagnolet bolt.

Dairy buildings need special doors which will not only withstand the kicking of cattle and knocking by heavy milk churns, but will be suitable for constant hosing-down with water. Suitable doors for applications of this type are detailed in B.S.2504, which covers both flush and framed types. Doors for buildings which are subject to the possibility of heavy face damage can be made with the faces and edges covered with light-gauge metal, such as galvanized steel sheet.

Fire Exit Doors

The most common type of door for this purpose is the solid bead and butt door having a normal 2in thickness. These are usually hung to open outwards and are fitted with panic bolts. Solid-cored flush doors are accepted by some authorities but often the plywood facings, if not the whole construction, are considered to be a fire risk. Glass panels are often used in fire cut-off and fire exit doors but it is usual to limit the glass areas to panels not exceeding 2ft sq each and to use wired glass.

Revolving Doors

These have advantages where there is a constant flow of users as a means of controlling draughts and retaining heat in the building; they are relatively slow in passing large crowds in and out, and consequently are often planned to have normal swing doors at their sides. Some authorities do not favour the use of revolving doors in buildings where crowds congregate, such as in public halls and theatres. This type of door is usually supplied and fitted by specialist contractors. The doors and the enclosure should have large glass areas to allow very full vision to the users.

Multi-leaf Doors

Various types of folding and sliding doors are now in common use to permit very wide openings being formed. The design of the combined doors is largely dependent on the size of the opening and the type of gear selected in conjunction with them. The doors may be either solid framed and panelled types or they may be of flush types. The joints of the doors are rebated and hinged together and each leaf usually has top and bottom bolts. One leaf is usually hung to act as a pass door which may be placed at the centre or at one end. Special attention should be given to the selection of door furniture to avoid any obstruction to movement. Narrower openings usually have all the leaves moving to one side but for large openings it is often desirable to fold part of the whole door to each side.

In addition to folding and sliding types there are those which slide round-the-corner to rest against the side wall, which are useful when accommodation can be planned conveniently for folding types.

Sliding doors can now be provided of almost any dimensions. The larger sizes are frequently power-operated because of their weight. Vertical sliding doors are also used occasionally but frequently present problems of head-room.

Rolling Shutters

These shutters may be made of wood or steel, the latter now being the more general. They can be used for fairly wide openings. If these are used in positions demanding fire-resistance the size is often limited by the local authorities or the insurers of the building so that enquiry should be made at a very early stage of design. Rolling shutters can be hand operated, power-operated or automatically operated in response to a fusible link. Rolling shutters can incorporate wicket or pass doors for use when it is not desired to open the whole area.

Fire-resisting Doors

The aim of this type of door is to restrict the spread of fire and it is therefore essential to select only those types which are acceptable to local authorities and insurance companies and have been type tested to the satisfaction of the Fire Offices Committee, which has stringent rules as to construction. Many of the fire-resisting doors have timber cores, treated to withstand dry-rot, which are encased in steel sheets so fixed that they exclude air from the core but are free to expand under heat. Steel and asbestos doors are also made to provide higher fire resistance.

Lift Doors

Lift doors may be either normal types and sizes of door or made in pairs of a narrow width rebated together. Often they have to have a moderate or even high degree of fire-resistance to prevent fire being transmitted by lift shafts from one floor to another. Many lift doors are of solid construction but others have small glazed openings. They are very frequently of solid cored flush door construction, but metal doors are also widely used. Consideration should be given to the use of sliding lift doors so that they do not open towards those waiting for the lift. Lift cars are fitted with collapsible metal gates, or with sliding doors; the latter can only be adopted if the car width is sufficient to provide ample access space for the passengers in addition to the space occupied by the doors themselves when in this open position.

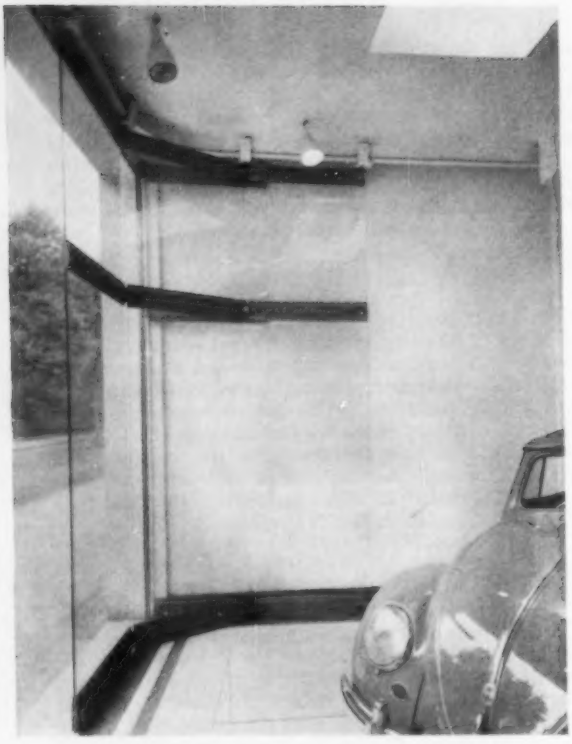
Sliding Doors

It is desirable whenever possible to avoid types of gear which require a bottom track which is fixed into the floor and consequently tends to accumulate dirt. All forms of bottom track which incorporate anything above the normal floor level should be avoided at all costs on account of the risk that upstanding portions may trip those who cross them.

Hardware for Doors

If special types of hardware are needed this fact should be given careful consideration when door types are being selected or detailed. For example, doors having narrow stiles and narrow rails will only accept locks with narrow cases with which knob type door furniture can be uncomfortable in use as the knob is too near the door frame or lining due to the depth of the closing rebate. Few doors of standard production are designed with a sufficiently deep rail and suitable jointing of the rail to stile to admit the use of 5 or 6in mortice locks which place the door handle comfortably away from the door frame.

Pressed-steel door by Hope Bros., Ltd. Staythorpe Power Station, Notts. Architect: T. Cecil Howitt. The door is reinforced internally and filled with sound-deadening material



1

Plate Glass Doors

1. *Frameless glass slidaway doors as fitted by Haskins.*

2. *" Armourplate " glass entrances by Haskins for garage at Perivale, Middlesex. Architects: Wallis, Gilbert & Partners.*

3. *Single " Armourplate " glass entrance door and side panels by Pilkington Bros., Ltd., for Aquascutum Ltd., Manchester.*

4. *" Armourplate " glass doors at entrance to London showrooms of Fibreglass Ltd., by Pilkington Bros., Ltd.*

5. *Pair of Pilkington " Armourcast " glass entrance doors in office block of Northampton Works of John Blackwood Hodge, Ltd.*

2

3

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5

Firms Mentioned in this Article

BOLTON GATE CO., LTD.,
Waterloo Street, Bolton, Lancs. Bolton 4240.
Fire-resisting, Steel, Collapsible Shutter, Sliding and Folding, Lift, Plate Glass, Overhead Doors and Collapsible grilles.

G. BRADY & CO., LTD.,
New Islington Works, Manchester 4. Collyhurst 2797/8.
Roller Shutters, Lift Doors and Overhead Doors.

BRITISH TROLLEY TRACK CO., LTD.,
49 Copperfield Street, London, S.E.1. Waterloo 4311.
Movable Gear of all types.

D. BURKLE & SON, LTD.,
174-8 Elthorne Road, London, N.19. Archway 4061.
Special design doors and Revolving Doors.

CLARKE ELLARD ENGINEERING CO., LTD.,
Works Road, Letchworth, Herts. Letchworth 613/4.
Movable Gear of all types.

T. B. COLMAN & SONS, LTD.,
102/4 Tamworth Road, Hove, 3, Sussex. Hove 31022.
Revolving Doors.

CRITTALL MANUFACTURING CO., LTD.,
210 High Holborn, London, W.C.1. Holborn 6612/9.
Steel Doors, Sliding and Folding Glass, Collapsible Shutters, Collapsible Grilles and Sliding and Folding Leaf.

CURFEW DOORS & SHUTTERS, LTD.,
Ancoats, Manchester 4. Collyhurst 3908.
Roller Shutters, Steel and Fire Resisting, Sliding and Folding Leaf, Overhead Doors and Lift Doors.

DENNISON, KETT & CO., LTD.,
Kenoval House, Farmers Road, London, S.E.5. Reliance 4266.
Roller Shutters, Fire-resisting Doors, Lift Doors and Gates and Collapsible Grilles.

DURASTEEL, LTD.,
Oldfield Lane, Greenford, Middlesex. Waxlow 1051.
Fire-resisting Doors.

ECLAIR DOORS, LTD.,
239-242, Gt. Lister Street, Birmingham, 7. Aston Cross 4061.
Roller Shutters, Collapsible Shutters, Lift Doors and Overhead Doors.

S. ELLIOTT & SONS (READING), LTD.,
Caversham, Reading, Berks. Reading 71536/7.
Special design doors and Revolving Doors.

ESAVIAN, LTD.,
Esavian Works, Stevenage, Herts. Stevenage 500.
Collapsible Shutters and Sliding and Folding Leaf Doors.

A. L. GIBSON & CO., LTD.,
Radnor Works, Strawberry Vale, Twickenham, Middlesex. Popesgrove 2276.
Rolling Shutters, Collapsible Grilles.

J. & E. HALL, LTD.,
Dartford Ironworks, Dartford, Kent. Dartford 3456.
Lift Doors.

HAMMOND & CHAMPNESS, LTD.,
Gnome House, Blackhorse Lane, London, E.17. Larkswood 1071.
Lift Doors.

HASKINS,
Gnome House, Blackhorse Lane, London, E.17. Larkswood 2622.
Roller Shutters, Steel and Fire-resisting Doors, Glass Doors, Collapsible Shutters, Sliding and Folding Leaf.

HAYWARDS, LTD.,
187-193 Union Street, London, S.E.1. Waterloo 6035.
Steel and Fire-resisting Doors.

P. C. HENDERSON, LTD.,
Tangent Works, Barking, Essex. Rippleway 3406.
Movable Gear of all types.

E. HILL ALDAM & CO., LTD.,
Britannic Works, Haslemere Avenue, London, S.W.18. Wimbledon 8080.
Movable Gear of all types.

HENRY HOPE & SONS, LTD.,
Halford Works, Smethwick, Birmingham. Smethwick 0891.
Steel and Fire-resisting, Glass Doors, Sliding and Folding Leaf.

G. W. KING, LTD.,
Argyle Works, Stevenage, Herts. Stevenage 440.
Steel and Fire-resisting Doors, Collapsible Shutters, Sliding and Folding Leaf.

MACLEAN & CO. (METAL WINDOWS), LTD.,
Cadzow Works, Hamilton, Lanarkshire. Hamilton 1410/4.
Steel Doors and Fire-resisting Doors.

MATHER & PLATT, LTD.,
Park Works, Manchester 10. Collyhurst 2321.
Roller Shutter, Steel and Fire-resisting Doors, Lift Doors and Sliding and Folding Leaf.

MORRIS SINGER, LTD.,
Forest Road, London, E.17. Larkswood 1055/6.
Steel Doors and Glass Doors.

WM. NEWMAN & SONS, LTD.,
Hospital Street, Birmingham 19. Aston Cross 3221/3.
Movable Gear of all types.

PILKINGTON BROS., LTD.,
St. Helens, Lancs. St. Helens 4001.
Plate Glass Doors.

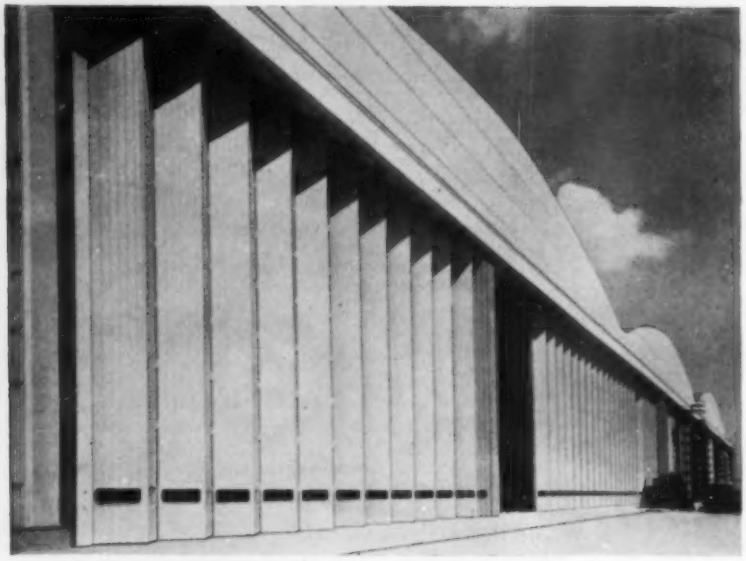
E. POLLARD & CO., LTD.,
159 St. John Street, London, E.C.1. Clerkenwell 6701.
Revolving Doors.

POTTER RAX, LTD.,
Shepperton Road, London, N.1. Canonbury 6455.
Roller Shutters, Collapsible Shutters, Sliding and Folding Leaf and Lift Doors.

VENESTA, LTD.,
Vintry House, Queen Street Place, London, E.C.4. Central 3040.
Plymax Metal Faced Doors.

WILLIAMS & WILLIAMS, LTD.,
Victoria House, Southampton Row, London, W.C.1. Holborn 9861/5.
Steel Doors, Sliding and Folding Leaf Doors, Glass Doors.

The picture on the left shows a set of all-glazed vertical lifting doors manufactured by Eclair Doors Ltd. They are operated on the interior and exterior by road mats. These doors can be supplied for hand winch operation or power operation by push button and in the solid or glazed.



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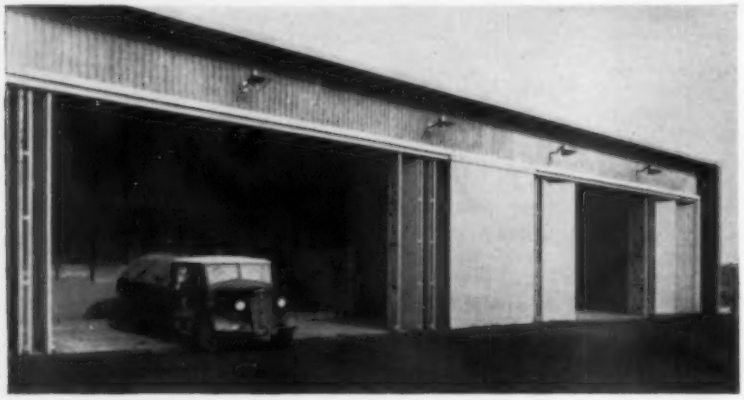

2

Sliding Folding Doors

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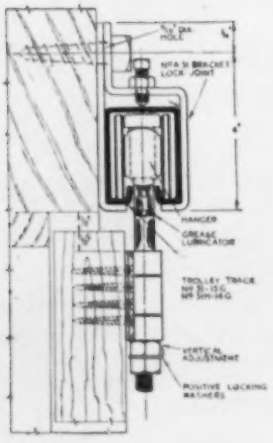

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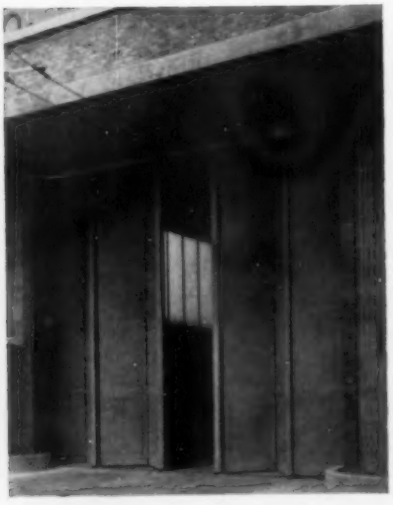

1. *These aluminium Hangar Doors by Esavian, Ltd., were installed at Filton, Bristol, for the Bristol Aeroplane Co. in connection with the Brabazon project. Architect: Eric Ross. Consulting Engineers: Brian Colquhoun & Partners. This type of door is designed for use in large openings of from 20ft to 70ft high and up to 300ft and over in width.*

2. *End hung folding doors to very wide openings (60ft 0in x 17ft 0in) on "Aero" bottom sliding door gear. Complete doors, gear and erection carried out by G. W. King, Ltd.*

3. *Vertical section (top) of "Foldaside 316" end folding door gear by E. Hill Aldam & Co., Ltd. This is claimed to be suitable for garage or industrial doors up to about 10ft high. Door widths should not exceed 3ft. Swing doors when required should preferably be attached to suites of doors whose end leaf is hinged to a jamb. Four wheel hangers should be used to support swing doors.*

4. *Sliding folding doors by Crittall Manufacturing Co., Ltd., at new Power Station "B" for British Electricity Authority at Southwick, Sussex. Architects: L. G. Mouchel & Partners. The centre hung leaves are constructed from 3in x 1½in R.S. Channel frames, welded at corners with 12G Box rails welded to channel jambs and 14G pressed steel panelling. ¼in plate panels at head and cill and 8in x 3in channel jambs. Bronze bolts at head and cill on inside and bow handles both to alternate leaves. Hasp on meeting rail.*

5. *Timber doors by Esavian, Ltd., at Castle Lane Transport Depot of Bournemouth Corporation. Architects: Jackson & Greenen S. & A.*

6

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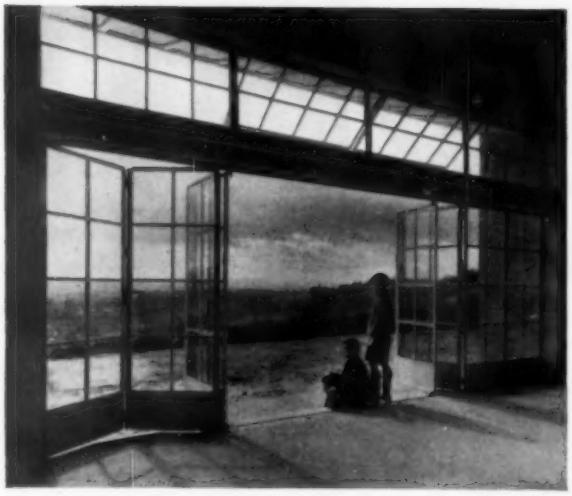

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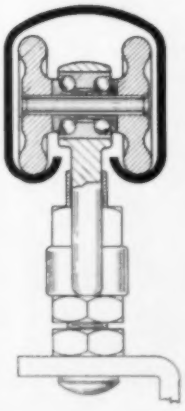


6. *Sliding folding doors by Crittall Manufacturing Co., Ltd., at Bradstock Lockett Home, Southport. Architects: Norman Jones, Sons & Rigby. The self-aligning ball-bearing wheels which carry the leaves are inclined at an angle to overcome outward thrust when opening.*

7. *Sliding folding doors by Henry Hope & Sons, Ltd., installed at Welshpool Nursery and Infants School, Welshpool. Architect: H. Carr, County Architect, Montgomeryshire. These doors are hung at the head and fitted with special bronze hinges and pull-handles and are held in closed position with specially designed long, double-action bronze cremone bolts.*

8. *Timber sliding folding doors by Esavian, Ltd., for Morden, Surrey, bandstand.*

9. *"Rolls" sliding door gear by Clarke Ellard Engineering Co., Ltd. Features of design: Arched track top for strength, straight track walls to avoid distortion, round track treads for true alignment, accessible adjustments without dismantling, soft alloy wheels, precision ball bearings.*

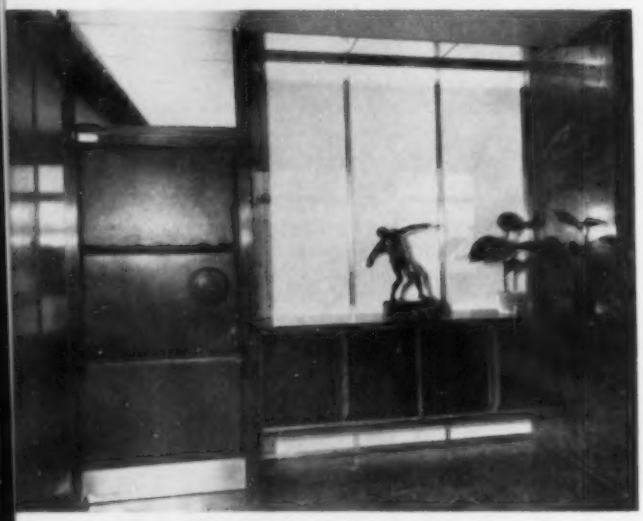
10. *Panelling and folding doors in quartered figured African Mahogany by D. Burkle & Son, Ltd., between boardroom and dining-room of Bank of the Middle East, Ltd., 51 Gracechurch St., London, E.C. Architects: J. M. Wilson, H. C. Mason & Partners.*

11. *Sliding and folding partition by Esavian, Ltd., at Hungaria Restaurant, London. Architects: Greenwood Richards & Partners. The partition slides and folds either to one side or to both sides of the opening.*

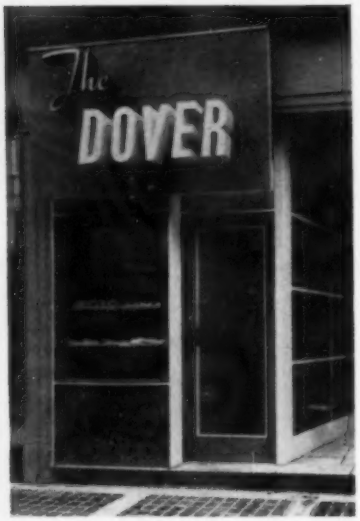
10

11

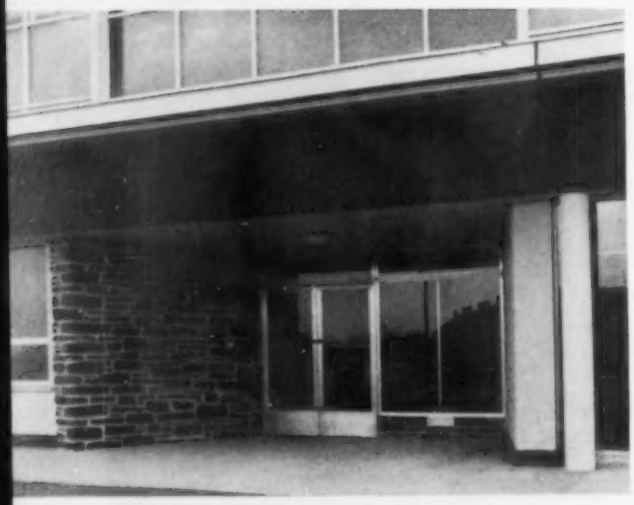
Special Design Doors



Left: Boardroom door in new head offices of Richard Costain Ltd. Architect: R. N. Wakelin of Campbell Jones & Sons

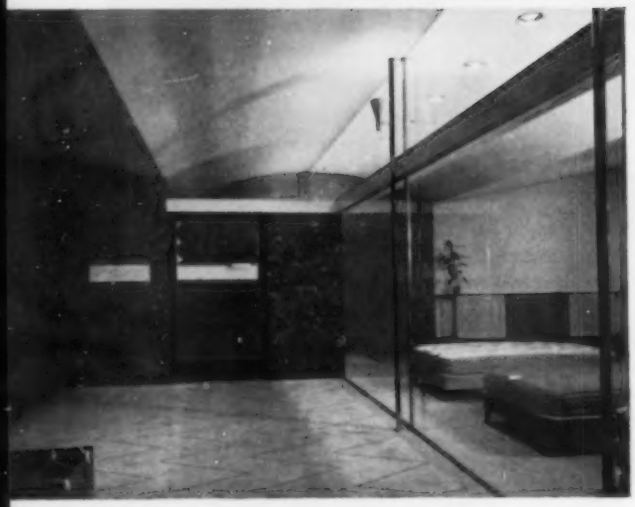


Above: Entrance door to restaurant, Dover St., London, W.1. Architects: Peter Sanderson & Michael Woodford

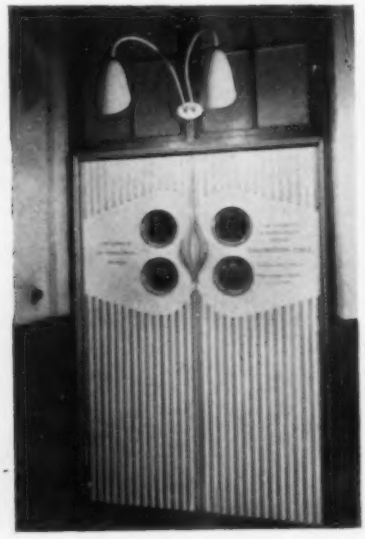


Left: Main entrance to Woodfield Secondary Modern School. Architect: Denis Clarke Hall in association with C. G. Stillman, Middlesex County Architect

Below: Temporary swing door designed by Peter Hatch to cover existing doors which predetermined position of portholes



Left: Door to showroom, Grosvenor St., London. Architect: Dennis Lennon

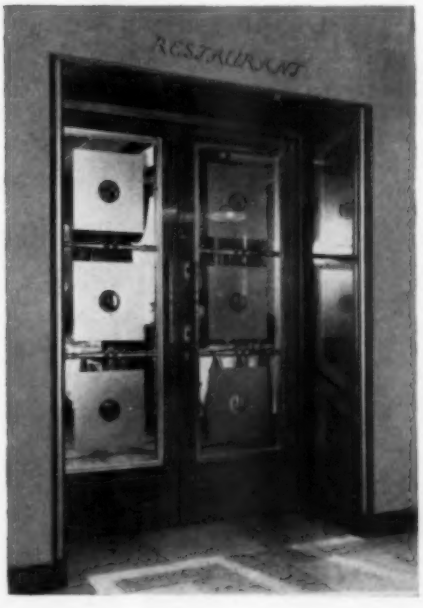


Right: Plate glass door in coffee bar, Princes Street, W.1. Architect: Adam Gelister

Left: Strengthened and laminated glass door in Terminal Building, Zurich Airport. Architects: A. & H. Oeschger, Zurich

Below: Pair of doors at Westbury Hotel, Bond Street, Architect: Michael Rosenauer

Above: Doors in foyer of Academy Cinema, W.1, with brass strip diaper on plastic hide padding. The fan is in plaster and metal with gilded vent grille incorporated. Chief Designer: Angus McBean. Consultant Architect: Alister MacDonald



Above: Entrance doors to Store at Chelmsford, Essex. Made by D. Burkle & Son. Architect: Roff Marsh

Above: Main entrance doors to auditorium and door to projection room of private cinema for Shell-Mex & B.P. Ltd. Architects: W. S. Hattrell & Partners

Rolling Shutters

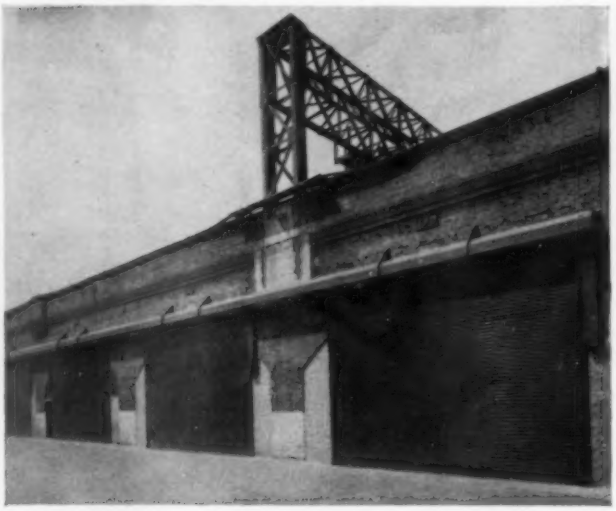
1. *The "Firola" fire-resisting steel shutter as installed by Haskins for Sainsbury at Lambeth. These shutters can be operated either electrically or by any of the manual methods.*

2. *This crane opening has a maximum height of 38ft 6in and maximum width of 43ft 3in. It is fitted with three "Kinnear" patent steel rolling shutters and three hinged guides by Arthur L. Gibson & Co., Ltd., the guide at extreme left of opening being permanently fixed. The shutters and guides are raised and lowered by crank and bevel gear, the shutters being operated singly and the three guides simultaneously.*

3. *Bank of rolling wood doors fitted by G. Brady & Co., Ltd. Can be operated either manually or electrically. Inset plastic windows can be supplied if required.*

4. *No. 12 type fire-resisting shutter by Dennison Kett & Co., Ltd. 4ft 10in wide x 7ft 0in high. To L.C.C. and F.O.C. Regulations. Escape staircase from showrooms (see diagram below).*

5. *No. 5 type self-coiling wood rolling shutter by Dennison Kett & Co., Ltd. Six miniature lath shutters in oak ranging in size from 2ft 1¾in to 4ft 9⅞in wide x 4ft 3in high. Operated by lifting handles.*



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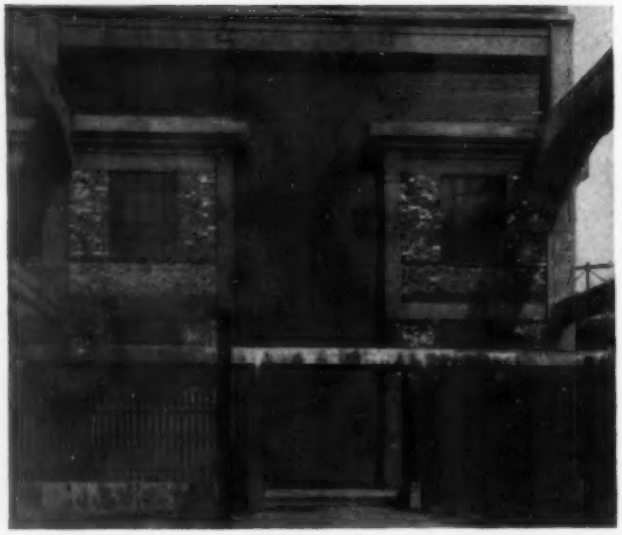

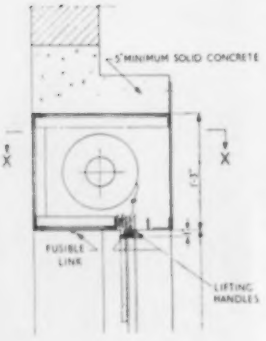

Typical arrangement of Dennison Kett fire-resisting shutter No. 12 type, self coiling. In compliance with L.C.C. specifications for single shutters to staircases, passages, etc. The F.O.C. do not require a fusible link. The maximum permitted dimensions are 8ft 0in wide x 7ft 0in high. The opening area must not exceed 56 sq ft.

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Multi-leaf Doors

1. Shutter door installed by Bolton Gate Co., Ltd., at Renold House, Wythenshawe. Architects: Cruickshank & Seward.

2. Part of eight pairs of shutter gates installed by Bolton Gate Co., Ltd., for Rowe Bros. & Co., Ltd., Liverpool, architects: Richard Owen & Sons. The gates vary in overall size from 16ft 8in high x 21ft 0in wide to 17ft 5in high x 21ft 0in wide. The gates bunch behind the brickwork, allowing an unrestricted clear opening. Made from 1in steel pickets and 1½in lattice bars.

3. Collapsible aluminium shutters fitted to news-agent's stall at Lime Street Station, Liverpool, by Potter Rax, Ltd. Architect: Brian Peake.

4. This drawing shows a typical detail of electrical operating gear for shutter gates by the Bolton Gate Co., Ltd. The key to the parts follows:—

1. *Geared motor unit.*
2. *Geared motor wall fixing bracket.*
3. *17-tooth chain driving sprocket.*
4. *17-tooth chain sprockets.*
5. *Chain tensioning device with Jockey sprocket.*
6. *Track fixing bracket.*
7. *9in deep box type top track.*
8. *1⅛in thick M.S. cover plate.*
9. *Bolton patent shutter gate.*
10. *Patent drive coupling.*
11. *Handle for disconnecting drive to permit emergency hand operation.*
12. *Limit switch and striker.*
13. *Rigid front—*
    7in wide on single gates.
    9in wide on gates in pair.

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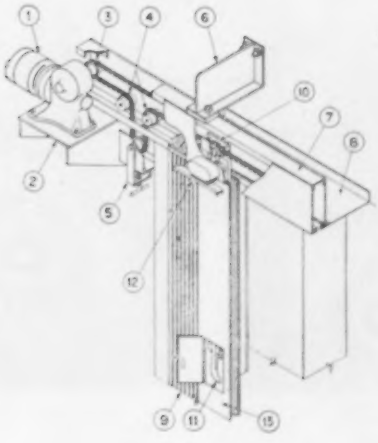
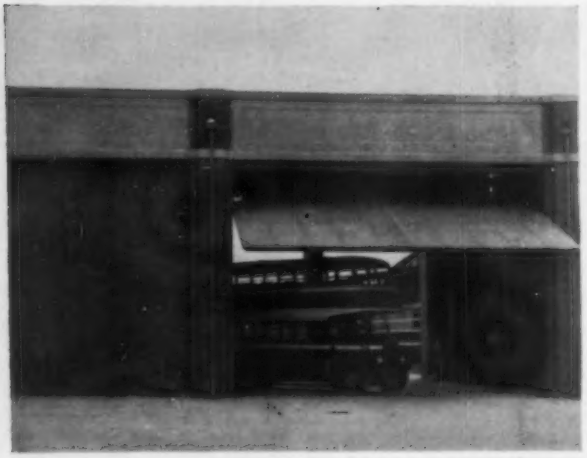


Overhead Doors



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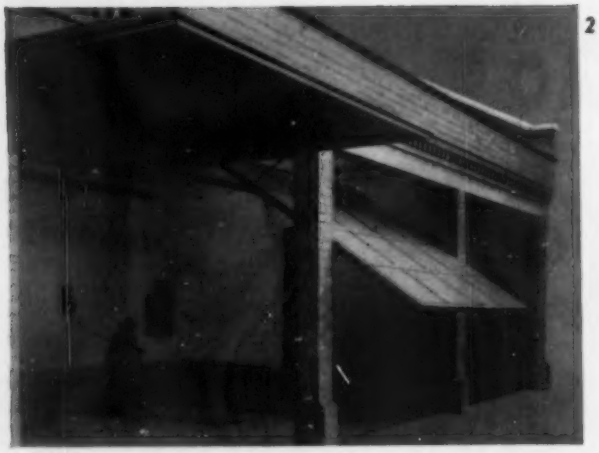
1. *Power-operated doors approximately 30ft wide x 18ft high installed at a bus garage by Eclair Doors, Ltd.*

2. *A run of three doors installed at a transport garage by Eclair Doors, Ltd. Approximately 14ft wide x 12ft high.*

3. *A 75ft x 15ft high door installed on a tank hangar by Eclair Doors, Ltd. Hand operated.*



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4 & 5. *The " Glydover " garage door by Bolton Gate Co., Ltd. The steel door starts to slide upwards automatically when unlocked and a touch of the hand completes the operation. Runs on ball-bearing rollers and is counterbalanced by springs which draw the door up and out of sight. Standard size 8ft x 7ft high. Can be supplied for electrical operation.*

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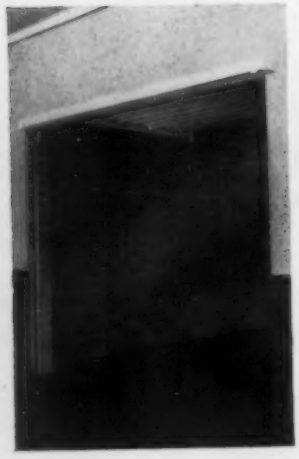

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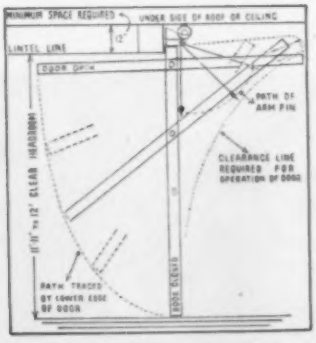
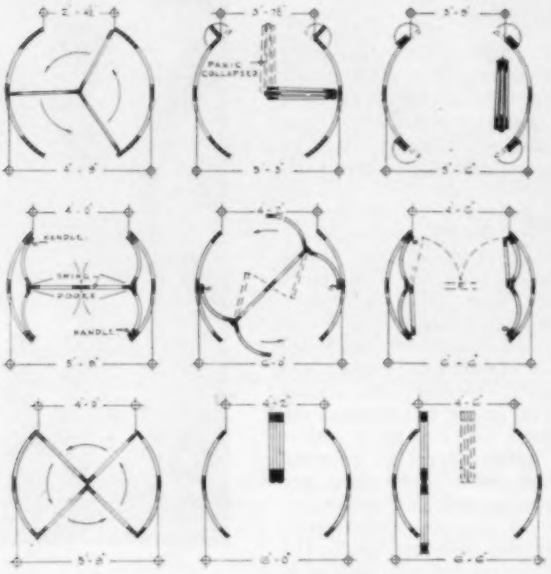


Diagram showing operation of "Eclair" overhead door which is claimed to be suitable for all sizes from 3ft to 300ft wide in one span.



Typical arrangement of revolving doors by Samuel Elliott & Sons (Reading) Ltd.

1

Revolving Doors

1. *Automatic collapse and manual folding revolving doors as supplied by E. Pollard & Co., Ltd. Under panic conditions, when pressure is applied to both left and right leaves at the same time, all four collapse and fold parallel in the centre of the opening. Can be folded manually by simple operation.*

2. *Circular door in main entrance of Department of Natural Philosophy, Glasgow University. Architects: Basil Spence & Partners. Frame of concrete with aluminium and timber slatting. Panels of Armourplate. Gear by Wm. Newman & Sons, Ltd.*

2

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3. *Revolving door by T. B. Colman & Sons, Ltd., installed at the Leeds offices of The Eagle Star Insurance Co., Ltd. Architects: Charlton & Crowther of Leeds.*

Lift Doors

1. *Right: Centre-operating bi-parting door fitted to the Rhodesia Castle. The doors are 16-gauge Zintex sheet steel on an inner 14-gauge steel channel frame and packed with glass wool, the edges are sealed with binders. Every door is provided with a panel of glazed clear Georgian wired glass. These doors are also fitted with the necessary smoke fillets and architraves. The doors are sometimes fitted with automatic opening and closing gear and in this instance the doors would be fitted with a "safety edge" so arranged that when the doors are closing any obstruction returns the door immediately to the open position. The doors are normally finished in solid colour 7-coat baked enamel. By J. & E. Hall Ltd.*

1

2. *Sliding leaf lift door by Hammond & Champness Ltd. These doors have self-closing mechanism fitted to the standard type. They are also suitable for manual operation. The doors are suspended on large diameter ball-bearing rollers enclosed in a box-type top track, which ensures silent and smooth operation.*

2

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4. *Right: Twin sliding doors, each door partly slides behind the other during opening. Where architraves are fitted these are formed in 14-gauge Zintex sheet steel. On board ship these architraves are also fitted with smoke fillets but centre opening doors are usually the only type of door used at sea. By J. & E. Hall Ltd.*

4

3. *Two-panel one way sliding lift doors by Hammond & Champness Ltd. The leading panel slides at twice the speed of the second panel so that when fully open the two doors coincide. Can be power or manually operated.*

5. *Collapsible shutter type lift door as supplied by Potter Rax Ltd. to Alliance Assurance Co. Ltd., London.*

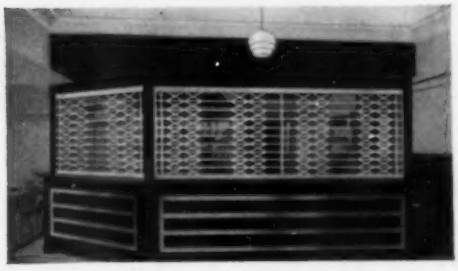
5

Collapsible Grilles

Rolling portcullis grille as supplied by Haskins. The curtain is usually constructed of horizontal mild steel tubes connected by vertical links which are retained in position by steel distance pieces. The bottoms are reinforced with an angle or tee iron bar. Wicket gates can be fitted. Can be operated either manually or by power.

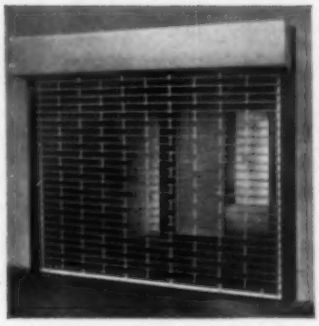
Right: No. 22 type steel rolling grille by Dennison, Kett & Co., Ltd. Constructed from mild steel, the ends of the horizontal rods are locked to prevent lateral movement. Can be supplied either self-coiling or gear-operated. Portable or automatic wicket doors can be fitted if required. The spring barrel assembly is of steel tube to reduce deflection to a minimum and is fitted with M.S. spindle in C.I spring blocks. The helical type counter-balance springs are of spring steel wire (BSS970 EN49B).

Right, bottom: No. 21 type steel rolling grille by Dennison, Kett & Co., Ltd. This is also of mild steel construction and supplied either self-coiling or gear-operated. The grille has a very similar general specification to No. 22 above.



This upward lifting bar counter grille by Bolton Gate Co., Ltd., bunches completely out of sight above the opening: constructed ½in pickets at 3½in centres it has a 3in fixed front in which is incorporated the locking arrangement.

The "Curfew" rolling grille is made in steel or aluminium alloy by Curfew Doors & Shutters Ltd., and can be fitted to shop fronts, arcades, school cloakrooms, etc.



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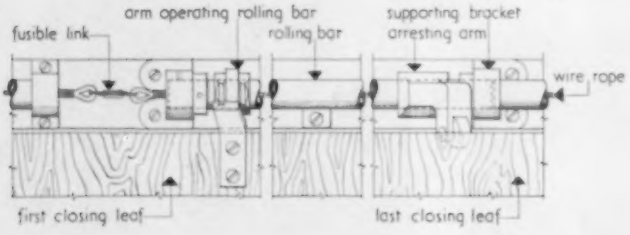
Fire-resisting and Metal Doors Generally

1. *Fire-resisting steel hinged door by Dennison Kett & Co., Ltd. Made from $\frac{1}{4}$in thick M.S. Plate and 4in x $\frac{1}{4}$in M.S. flat stiles. Location: B.B.C. Television Studios, Wood Lane, London, W.12.*

2. *Sliding steel doors by Crittall Manufacturing Co. Ltd., leaves from $2\frac{1}{2}$in × $2\frac{1}{2}$in × $\frac{5}{16}$in tees, 10 G plate bottoms, 16 G upper panels, sunk handles and bolts at cill. Henderson head and cill trap.*

3. *" Duracheck " single leaf hinged-type fire-resisting door. F.O.C. grading—2 hours. Also made in twin leaf pattern. Leaf is of $\frac{7}{8}$in thickness laminated steel and asbestos-bound round all edges in 10-gauge channel section.*



4. *Standard flush pressed steel sliding door by Crittall Manufacturing Co. Ltd.*

Drawing. *The patent controlling appliance by Haywards Ltd. ensures that the leaves of self-closing doors reach the closed position in the right sequence. The fusing of the link*

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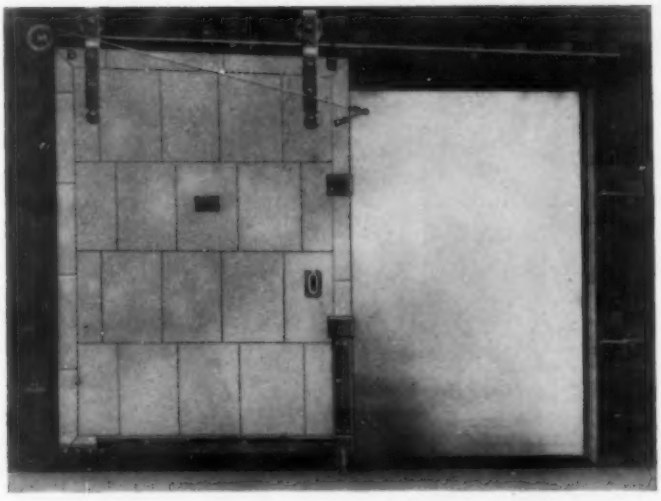

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automatically releases the doors and brings the appliance into operation. A rolling bar is fixed over the head of the door frame with brackets at each end. On the door leaves being freed, the last closing leaf is held open until the first-closing leaf is near the closed position, when by action through the bracket and the rolling bar the second leaf is released and follows the first to the fully closed position.

5. *Aluminium internal doors with glazing panel, by Williams & Williams, Ltd., for Adhesive Tapes, Ltd., Boreham Wood, Herts. Architect: C. E. Collins, F.R.I.B.A.*

6. *Sliding fire door by Curfew Doors & Shutters, Ltd. If fire breaks out, this door will close itself by the melting of the fusible link which holds the counterbalance weight.*

7. *A pair of garage doors by Venesta, Ltd. Constructed from solid "Plymax," steel faced both sides, 1¼in thick overall. Doors metal edged with glass panels. Painted finish.*

8. *A non-automatic hinged composite fire-resisting door by Mather & Platt, Ltd.*

MOSAICS

FITTINGS
OFFICE FURNITURE
C5/8

The partitioning panel itself is used as the rear support for the shelves in "Steelbrac" combined shelving and partitioning panel units manufactured by Steel Bracketing and Lathing Ltd., of Willow Lane, Mitcham, Surrey. A pilfer-proof store room can be made with this built-in shelving by bolting together a sufficient number of units to enclose the available space. The steel back panels are spot welded right round the frame and across the centre member to prevent being prised open. Alternatively, the back can be glazed to allow passage of light. Shelves are fully adjustable. The units are available either in standard sizes, or purpose-made to suit individual requirements.

SERVICES
ELECTRICAL
ACCESSORIES
B5/47

Crater Products Ltd., of The Lye, St. Johns, Woking, Surrey, are now producing rotary switches with a barrel type key-operated mechanism. This modification covers their existing range of rotary switches. A large number of different key sequences are available and the key can be made to withdraw or not in various positions as desired. All normal switch sequences and many other special sequences are available with this type of operation whether for A.C. or D.C. mains. Finish: Chromium plate.

PLANT
WOODWORKING MACHINERY
E1/15

This new 14in wide throat bandsaw the "Willow" Mark II has been produced by The British Rawhide Belting Co. Ltd., 246/8, Great Portland Street, London, W.1. The machine has been designed for the woodworking, Plastics and Non-Ferrous industries. It can be supplied as a plain bench model with single pulling drive or as a motorized unit with ½ h.p. Hoover motor and push-button starter. Fence mechanism and tenoned mitre block can be supplied as extras. The heavy frame provides complete cover and the front is removable for instant access. Made from close grained cast-iron. The saw drums are of die-cast aluminium. Table size 15¼in x 14in. Dimensions: 36in x 36in x 16in. Price: Plain Bench model, £52 10s, Motorized model £70.

SERVICES
VENTILATION
B2/24

P. M. Walker & Co. (Halifax) Ltd., Alexandra Works, Halifax, have recently introduced a new type of ventilator. It is claimed to have a greater air output for power consumed than any other available type of ventilator. The ventilator is automatically sealed by means of stainless steel shutters when the fan is stopped, thus reducing heat loss to a minimum. The body is of galvanized steel sheet sprayed three coats chlorinated rubber. Moisture-proof motors are available. The unit has been designed for the rapid removal of contaminated or vitiated air which is driven upwards at high velocity. Six sizes are available with air movement ratings between 2,000 and 27,000 cu ft per minute.

INDUSTRIAL NOTES

● A useful guide to the principal uses of bitumen in building construction appears in the spring issue of *Building Topics*, which is obtainable free of charge from the publishers at Tretol House, The Hyde, London, N.W.9. Telephone Colindale 7223.

● Mr. Edward A. Willment has accepted an appointment as general sales manager of the O.B.O. Construction Co., Ltd., Twickenham, Middlesex, manufacturers of Flint Sand and Clinker products.

● Mr. T. Pooley, who joined Expandite, Ltd., as sales manager last year, has been appointed general sales manager.

● Those who are interested in the latest mechanical handling equipment are advised that a 16mm colour sound film is available free on loan from *Mechanical Handling* (Associated Iliffe Press)—the journal which organizes the biennial Mechanical Handling Exhibition and Convention. Application for the film, which is at present being brought up to date, should be made to H. A. Collman, *Mechanical Handling*, Dorset House, Stamford Street, London, S.E.1 (Waterloo 3333).

● A recent meeting of the Council of the English Joinery Manufacturers' Association was held, with the President, Lieut-Col. S. R. Sharp, J.P., in the chair. A dinner of the members of the Council and their ladies was held in the evening at the Dorchester, when the President presented the Immediate Past President, Mr. W. E. Adams, J.P., with his illuminated scroll.

● The Monopolies and Restrictive Practices Commission announce that, with the approval of the Board of Trade, they have appointed Mr. J. A. R. Pimlott, C.B., to be their secretary, in succession to Mr. William Huges, C.B., who will be returning to the Board of Trade shortly at the end of his period of secondment. Mr. Pimlott is an Under-Secretary of the Board of Trade and will be seconded by that Department to the Commission on taking up his appointment.

● Sir William J. Larke, K.B.E., who will be 80 on April 26 next, is to be the guest of honour at a luncheon organized by the Institute of Welding and the British Welding Research Association at the Hyde Park Hotel on the previous day.

● A new £64,000 Irish firm, General Plastics, Ltd., announces the marketing from a factory at Carrick-on-Shannon of the first Irish-made electrical accessories for domestic use.

● Thermoplastic wall tiles are now made by the Marley Tile Co., Ltd., for use in kitchens and bathrooms, on staircases or in passages. Four-and-a-half inches square, they are available in five attractive pastel shades flecked with a second colour. The tiles, it is claimed, will not chip or suffer damage by impact. They are non-absorbent, greaseproof and have high resistance to acids and alkalis. But they are not suitable in places subject to excessive condensation such as basements or ground-floor rooms where there is no damp course.

● A Timber Decay Enquiry Bureau has been opened at 6, Southampton Place, London, W.C.1 (Telephone Nos. Holborn 3555 and 3556), for the convenience of architects, surveyors, builders and others in the London area. Specialists will be in attendance to deal with enquiries concerning dry rot, woodworm, and all kinds of timber decay.

They are contemporary. They are dignified. They fit equally well into a fashionable shop front or a sober office lobby. Wherever you go you see "ARMOURPLATE" Glass Doors demonstrating the fact that though a door is always a door, it need never be a visual barrier. The fittings supplied with the door are made of the highest quality materials. Handles can be varied to suit individual requirements.

PILKINGTON BROTHERS LIMITED

FOR FURTHER INFORMATION ON THE USE OF GLASS IN BUILDING, CONSULT THE TECHNICAL SALES AND SERVICE DEPARTMENT, ST. HELENS, LANCS. (TELEPHONE: ST. HELENS 4001), OR SELWYN HOUSE, CLEVELAND ROW, ST. JAMES'S, LONDON, S.W.1. (TELEPHONE: WHITEHALL 5672-6). SUPPLIES ARE AVAILABLE THROUGH THE USUAL TRADE CHANNELS. "ARMOURPLATE" is a registered trade mark of Pilkington Brothers Limited ADA19

has been used for over one million square yards of plastering in Great Britain because :

Quality never varies – every batch is mixed to tested factory standard, affording exact adherence to specifications throughout the contract.

Heat insulation is double that of ordinary plaster – and fire resistance is high.

Weight is less than half that of sand-based plaster – yet exceptionally strong and resistant to shrinkage cracking.

Plastering is easier and tidier – sand is unnecessary and no time is wasted on proportioning and dry-mixing.

. . . the pre-mixed plaster

For full details write to : The Gotham Company Limited, Nottingham.
The Carlisle Plaster & Cement Co. Cocklakes, Carlisle.

CURRENT MEASURED RATES (LONDON)

These apply to new work of normal character and some size. These rates are for time and materials only and carry 10 per cent in excess, so the appropriate essential on-costs should be added. The basis cost of material used in the calculation of these prices is taken from the foregoing tables which carried up to March, 1955.

[COPYRIGHT]

ESSENTIAL ON-COSTS

Fees payable to L.C.C. for District Surveyor:	
For new buildings of ordinary construction exceeding 5,000 cubic feet, for every 1,000 feet or part of same up to 1,000,000 cubic feet 1/6, together with an additional sum of £1/10/- ..	£1/10/- *at* + 1/6
After which allow per 1,000 do.	at + 9*d.*
For alterations and additions:	
When £100 the sum of £2/10/-, plus 12/6 for every £100 or part of same, up to £1,000 ..	£2/10/- *at* + 12/6 per 100
When over £1,000 the sum of £8/2/6, and for every £100 or part of same beyond 3/- ..	£8/2/6 *at* + 3/- per 100
Public buildings: Fees as above but plus 50% ..	+ 50%
Fees in respect of means of escape in case of fire are 1/5th of the above or £2 if greater or in the case of a one-storey building £1	1/5th
Steel framed or r.c. buildings double	+ 2

Allowance to cover National Insurances, Holidays with Pay and Public Holidays, Welfare, Third Party Risk, Travelling and Guaranteed Week is made in the rates attached to the items.	
Allow for Fire Insurance do.	½%
Allow for Water for use on the works and apparatus do.	6/6%
Allow for hoarding, or similar licences in City of London	say £10
Do. under Borough Councils per each month ..	say 2/6
Allow for Office, Fire, Attendance on C. or W., etc., p. week	say £1

Supervision, etc., assessment	Contract value £4,000	£6,000	£12,000	£24,000	£50,000
Cost of admin. ..	6%	5%	5%	4½%	4½%
Agent or foreman (each)	5%	4½%	3½%	2½%	1½%
Timekeeper or Watchman (each) ..	2½%	2½%	1½%	1%	½%

SPOT ITEMS AND DEMOLITION, ETC.

	Per foot run
Hoarding erected and removed	17/-
Planked gangway with handrail, etc. do.	9/-
Proper gantry do...	68/-
Sleeper roadways	14/6
Needling, strutting and shoring including all labours and use and waste in erection and removal ..	Per foot cube 17/-

ALTERATION-DEMOLITION—	1 Brick Per foot	1½ Brick super	2 Brick super	Per yard cube
Cutting out cement concrete or brickwork in small quantities ..	1/3	2/4	3/2	57/-
Do. if either in very small quantities or reinforced	2/1	3/8	5/3½	84/-
Debris into baskets and removed from inside to outside of bldg. ..	3½d.	7d.	8½d.	12/2

SCAFFOLDING (Avg. 45 ft high)

Per yard superficial	Period 1 month	3 months	5 months
Putlog type—4′ 6″ lift	5/-	6/10	8/8
Do. —6′ 0″ do.	3/8	5/2	6/7
Independent type—4′ 6″ lift	6/6	9/4	12/2
Do. —6′ 0″ do. ..	4/7	6/8	8/9

EXCAVATION

Per Yard Cube. *By hand*	Common Soil	Loamy Clay	Gravel or Clay	Rock or similar
Reducing levels	5/5	6/6	7/7	51/-
Surface trench not exceeding 5ft deep ..	11/1	13/4	17/8	63/-
Do. from 5ft to 10ft ..	20/3	22/11	27/4	69/-
Do. from 10ft to 15ft ..	25/3	27/9	32/2	75/-
Fill in and ram	4/5	5/8	5/8	5/8
Barrowing 25 yds.	2/7	2/10	2/10	3/2
Load vehicles and tip 8 miles away	14/4	14/4	14/11	15/7

PLANK AND STRUT	To 5ft deep	5 to 10 ft deep	10 to 15ft deep
To trenches, in normal ground Per Foot Super	5d.	6½d.	7½d.

CONCRETE 1½in. Ballast Aggregate	Per yard cube
1 : 3 : 6 Cement concrete in foundations	70/6
Do. around grillages	73/6

REINFORCED CONCRETE

1 : 2 :4—¾in. concrete, worked around reinforcement, between formwork in the following (at various levels):—

	Per cubic Yard
Foundations and surface beds	78/6
Walls, 12in. thick or more	85/6

Sectional inches	Lintols and beams	Columns and casings	Braces and projections
Up to 36	4/2	4/5	4/7 Per cubic ft
36 to 72	3/11	4/3	4/- do.
72 to 144	3/9	3/10	4/- do.
over 144	3/7	3/9	3/11 do.
Walls 6in thick			15/7 Per super yd
Do. 9in thick			22/8 do.
Suspended floors average 6in. thick ..			16/5 do.

REINFORCING RODS (round) bent and placed— Per cwt	¼in	⅜in	½in	¾ to 1in
In floors and beams ..	72/-	67/-	62/-	56/-
In walls	78 -	72/-	66/-	59/6
In columns	85/-	77/-	71/-	64/-

FORMWORK and Supports (4 times use)— Floor soffits	Beams	Walls	Columns
17/7 per Yard	2/5	2/1½	2/1½ per super foot

BRICKWORK

BRICKWORK per YARD superficial reduced to ONE BRICK in thickness (scaffold to add)—	In 1 : 3 cement mortar
Flettons or other similar *at* 113/- per 1,000 ..	37/6
Mild Stocks or do., *at* 221/6 per 1,000 ..	50/6
Second Stocks or do., *at* 256/6 per 1,000 ..	54/3
Southwater engineering or similar bricks, *at* 370/- per 1,000	71/4
Blue Staffordshire wire cut *at* 462/- per 1,000 ..	81/2
Deduct if 1 : 1 : 6 Cement-Lime mortar is used in lieu of 1 : 3 Portland Cement mortar	2*d.*
Add if brickwork commences above ground level	3/9
Do. if in backing to masonry including cutting and waste for bonding	2/10
Do. If circular-on-plan	6/10
Do. If in underpinning	6/10

BRICKWORK IN THICKNESS NOT REDUCED— Per yard superficial	Brick, on edge walls	Half-Brick walls	1 Brick 11″ finished fair both sides	Hollow with 2″ cavity and G.I. ties
In Flettons or similar ..	16/-	20/6	38/-	43/6
In second stocks or do.	21/9	28/9	53/8	59/6
Add: for pointing as work proceeds, per side	1/6	1/8	1/6	1/6
Thickness to old walls, including cutting, toothing and bonding to same an average total thickness of ¾ brick		Fletton 53/-	Stock 62/8	Per yard super
Do. all as last but an average total thickness of 1½ bricks ..		69/-	90/3	do.

WALLS BUILT IN SUPERIOR BRICKS— In 1 : 3 Cement mortar, fair faced and pointed on both sides as the work proceeds:—	Half-Brick	One Brick	
In first quality Stocks at 272/-..	34/-	60/6	Per yard
In red facings at 290/- ..	34/2	60/10	super
In bluepressed facings at 509/6	49/6	91/8	do.

GENERAL AND SUNDRY—			
Cut tooth and bond new brickwork to old			4/3 per ft
Damp proof course, double slate, horizontal ..			3/- super
Do., as last, but vertical			3/10 do.
Do., bitumen, Hessian base, do.			1/8 do.
Frames, bed and point in cement mortar, one side			4*d.* per ft. run
Window board of 6″ × 6″ × ¾″ rounded on edge quarry tiles, bedded, pointed, cut and fitted ..			3/- do.
Terra cotta air bricks built in and pointed, including flue	9″ × 6″ 5/-		9″ × 9″ 9/- each
Chimney pots, plain red, set and flaunched in cement mortar ..	1ft high 13/-		2ft high 19/- each
Metal windows, assembled, hoisted and fixed, lugs cut and pinned and frames bedded and pointed one side in cement mortar.. ..	Up to 5ft super 11/-		5ft to 10ft super 13/10 each
	10ft to 20ft super 21/6		20ft to 40ft super 35/6 each
Leaving holes through walls for pipes and afterwards making good ..	Small pipes 3*d.* per in in depth		Large pipes 6*d.* per in in depth
Cutting do., and afterwards do. ..	10*d.* do.		1/8 do.
Cut mortices in brickwork or concrete for bolts or dowels and run in with cement grout			1/1½ per in in depth, each
Holdfasts of stout iron hoop bent holed and screwed to frame and built in ..	1/2 each		

MEASURED RATES—*Continued*

BRICKWORK—*Continued*

FACING—

Extra only over common brickwork (113/- per 1,000) for facing with superior bricks in *Flemish bond* and pointing as the work proceeds.

Rustic Flettons (138/-)	3/9	per yard super
White (200/-)	8/4½	do.
First Stocks (272/-)	13/5	do.
Reds (290/-)	14/8	do.
Blue pressed (509/6)	36/8	do.

If built in English bond, *Add* 10% to above
If do. half-brick stretcher bond, *Less* 25% off above

COPING—

All labour and material in forming brick-on-edge coping with two course of roofing tiles under and cement weather fillets on both sides, built in cement and pointed as the work proceeds.

Per foot run	9″ thick	14″ thick
In picked Flettons	6/1	8/2
In first quality Stocks	7/5	10/10
In red facings	7/3	10/8

Plumbing angles	2*d.* per foot run
Fair cutting	10½*d.* do.
Fair raking cutting	1/5 do.
Fair circular cutting	1/5 do.
Fair squint or birdsmouth	1/9 do.

ARCHES

Extra over Fletton brickwork for forming window head with red facing bricks set on end and with 4½″ soffits and pointing	foot run 3/6
Do. for rubbed and gauged flat arch in red rubbers set in putty with fine joints	foot super 17/6

PARTITIONS

(over 100 Yards)	Per yard super— 2in.	2½in.	3in.
Concrete slab partitions in cement mortar	9/9	11/-	13/10
Hollow clay do.	11/10	12/9	14/2
Cutting and bonding at angles, intersections and ends	4½*d.* foot run		

PAVING	1in	1½in	1½in	
Grano trowelled gauge 5 : 2	8/-	9/-	10/-	yard super
1 × 5in skirting, square top and cove bottom			2/8	foot run
¼in × 6in red quarry tile paving			26/-	yard super
¼in × 6in do. skirting			1/9	foot run
Jointless flooring, ¼in thick			20/-	yard super

ASPHALTE (normal conditions and fair quantity)

¼in pitch mastic floor in one coat on felt underlay on prepared concrete base	B.S. 1450/48	B.S. 1375/47	
	Black	Brown	Red
Per yard super	12/6	13/2	15/-
	Unit	Mastic B.S.988	Natural Rock B.S.S. 1162/44
¼in in two thicknesses on felt underlay on prepared concrete base	yard super	17/-	22/6
Ditto in narrow widths	foot super	2/6	3/6
¼in skirting 6in high, angle fillet at bottom splayed and turned in at top	foot run	3/-	3/6
External angles	each	6*d.*	6*d.*
Internal *ditto*	each	10*d.*	10*d.*
Tanking or Damp Course		B.S.1097/43	B.S.1418/47
Vertical in two thicknesses	yard super	22/6	32/-
¼in horizontal *ditto*	yard super	15/-	23/6
Vertical in three thicknesses	yard super	32/-	39/-
1½in horizontal *ditto*	yard super	21/-	30/6
Labour rounded external angle	per foot run	6*d.*	6*d.*
Ditto internal angle fillet	per foot run	10*d.*	11*d.*
Ditto double *ditto*	per foot run	1/8	1/8
Collars to small pipes	each	3/6	4/-
Ditto to large pipes	each	6/6	8/-

DRAINAGE

Excavate trench, and plank and strut to sides, consolidate bottom to fall, return fill and ram earth after drain is laid, and load and remove surplus. In ordinary ground—moderately firm

Per lineal yard	
1 foot in depth	4/2
2 do.	7/2
3 do.	17/7
4 do.	23/4
5 do.	29/1
6 do.	36/11
7 do.	45/-
8 do.	57/-
9 do.	66/1
10 do.	73/4
11 do.	91/3
12 do.	102/6

Portland cement (1 : 6) concrete bed under drain pipes and benching up on both sides—6in thick	Per yard run 4in 18in wide	6in 20in wide	9in 23in wide
	5/7	6/6	8/1½

SALT GLAZED SANITARY DRAIN PIPES
and lay and joint with Yarn and Cement Mortar in trench.

Quality	Quantity	Per foot run 4in	6in	9in
" Best "	2 Tons or more	2/6	3/7	6/-
	over 100 pieces	2/9	4/1	6/9
	under 100 ditto	2/10	4/3	7/3
" Best Tested "	2 Tons or more	3/1	4/5	7/7
	over 100 pieces	3/7	5/4	9/-
	under 100 ditto	3/10	5/7	9/6
" British Standard "	2 Tons or more	2/8	3/11	6/6
	over 100 pieces	3/1	4/5	7/7
	under 100 ditto	3/3	4/8	7/11
" British Standard Tested "	2 Tons or more	3/3	4/9	8/-
	over 100 pieces	4/1	6/-	10/5
	under 100 ditto	4/2	6/3	10/10
Extra for bends " Best "—Contained in 2 Ton lots.		3/10	5/7	15/8
Extra for junction " Best "—4in. on 4in, 6in on 6in—9in on 9in	ditto	6/-	8/9	25/6

IRON DRAIN PIPES—

Heavy cast iron socketed and laying and jointing in molten lead—	Per foot run 4in	6in
In main runs	11/-	14/9
In branches	11/10	16/-
	each	
Extra over last for bends and extra joint	33/6	56/-
Do. on do. for junctions and extra joint	45/-	78/-
Cast iron gulley with 10½in inlet and 4in outlet, composed of hooper and trap, and 9in extension piece and 10½in grating, and jointing all together, and jointing to drain and surrounding in concrete	130/-	—
Do. rain water shoe with vertical inlet and inspection cover, and joint up and embed.	65/-	114/-

MANHOLE SUNDRIES—		4in	6in
Salt glazed straight half-round main channels	each	5/-	7/-
Do. curved	do.	10/6	15/-
Do. three-quarter section splayed channel bends (Barrons or similar)	do.	13/9	19/10
Heavy manhole steps galvanized	do.	9/3	—
Fix only manhole covers	do.	10/-	—
4in Mica flap, brass faced, f.a.i. valves and fix with molten lead joint	do.	38/-	—

ROOFER

CORRUGATED ASBESTOS SHEETS

P.C. 6/8½ per super yard, including side and end laps and fixing to wood	134/-	per square
Eaves filler pieces	1/9	foot run
Adjustable ridge	3/4	do.
Barge boards	2/8	do.
Plain roofing tiles, machine made, sand faced, 4in gauge nailed every 4th course with 1½in galvanized nails, to battens (measured separately)	226/-	do.
Extra over last for top edge or abutment cutting	1/1½	do.
Do. for double course at eaves	2/0½	do.
Do. for verges, undercloak, bed and point	2/9	do.
Do. Valley tiles including cutting and waste on both sides	10/-	do.
Do. Bonnet hips and do. bed and point	10/6	do.
Half-round ridge and bed and point	2/9	do.
Fixing soakers	1/4	dozen

Bituminous felt roofing in two layers, laid breaking joint and bedded with hot mastic and finished with fine dry grit	10/6	yard
Do. but in one layer only	7/9	super

WELSH SLATING—	Per square 16″ × 10″	18″ × 10″	20″ × 10″
3in lap, 2 zinc nails to each slate	297/-	303/-	354/-

Additional labours	Per foot lineal 1/6	1/8	1/10
At tops, verges and abutments—straight	1/6	1/8	1/10
Do. —raking	2/3	2/6	2/9
At hips and valleys (each side)	2/3	2/6	2/9
At eaves, double course	3/-	3/3	3/8
Do. to falls	4/6	4/10	5/6

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King Henry VI laid the foundation stone of Eton College Chapel in 1441. It is one of the finest examples of Perpendicular architecture in Great Britain.

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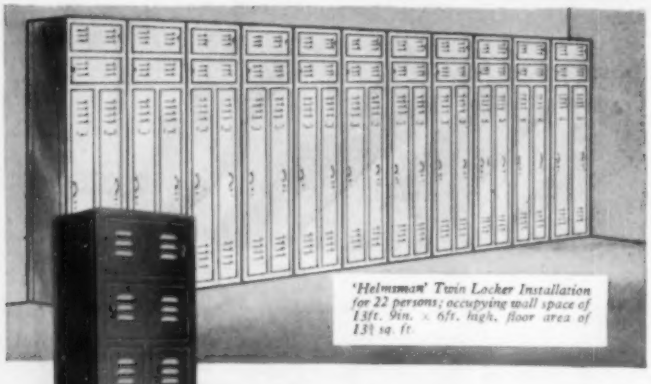

'Helmsman' Twin Locker Installation for 22 persons; occupying wall space of 13ft. 9in. × 6ft. high, floor area of 13½ sq. ft.

Save MONEY and 37½% WALL SPACE ON CLOTHES STORAGE!

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W. B. BAWN & COMPANY LTD.

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HELMSMAN

MEASURED RATES—*Continued*

FLOORS AND FLATS

Hollow tile in situ or precast units hoisted, bedded and fixed—

Superimposed load in lb per foot super	Span 12 feet	Span 16 feet
50 ..	44/-	50/3
Per yard super. 100 ..	45/9	53/-
150 ..	49/6	56/3

20lb has been allowed to cover dead load in surface finish.
Fair edge to slabs .. .. 9*d.* per foot run
Splay cutting and waste .. .. .. 1/9 do.

CARPENTER AND JOINER

SOFTWOOD CARCASSING—

	per foot cube— Plates	Joists	Rafters	Trusses
Labour, materials, waste nails, hoisting and fixing	18/6	19/8	21/-	23/3

FLOORING— Per square—	⅝in	1in	1¼in
Rough boarding	130/-	159/6	196/6
Softwood batten flooring, straight joints, splayed headings	131/7	161/-	198/6
Do. grooved and tongued	162/-	190/6	235/-

SKIRTING— Per foot superficial—	½in	⅝in	1in
Wrot softwood moulded skirting with grounds and backings plugged ..	3/5	4/-	4/7
Mitres to do. .. 3*d.* per sectional inch.			
Fitted ends .. 2*d.* do.			

SASHES, fanlights, casements, borrowed lights, etc.—

Per foot super—	Without bars	With bars (2ft sup. in each square)
2in softwood rebated, moulded and fixed	2/11	5/-
Add if fitted with beads	6*d.*	1/6
Add if hanging on butts	2/1 each	

WINDOWS, hung on lines—
Softwood cased frames, 1in inner and outer linings, 1¼in pulley stiles, 2in sashes, oak sill.

Overall size of frames— Per foot super.	6ft	21ft	32ft	44ft
Window as described	16/10	9/2	7/1	5/7
Add if sashes in squares, about 2 feet super in each	—	1/4½	1/8½	1/7½
Extra for hanging sashes with lines, weights and axle pulleys	27/- each	44/6	55/-	74/-

FINISHINGS TO OPENINGS—

Per foot super—	⅝in	1in	1¼in	1½in
Softwood linings, tongued at angles and tongued to frame including grounds and backings	3/4	3/10	4/7	5/2
Add if crosstongued	6*d.*	6*d.*	6*d.*	6*d.*
Softwood wrot rounded on front edge and with tongue at back window board including groove in sill and bearers	3/3	3/8	4/6	5/-
Add for ends to last notched, returned and rounded	1/-	1/1	1/2	1/3

Per foot run— Sectional area in inches—	1	2	3	4	5	6
Softwood wrot and fixed in bearers, backings, grounds, fillets, and similar	3½*d.*	6*d.*	8½*d.*	10½*d.*	1/1	1/3
Add if in short lengths ..	2*d.*	2*d.*	2½*d.*	2½*d.*	3*d.*	3*d.*
,, if plugged to brickwork	4*d.*	4*d.*	4*d.*	4*d.*	4*d.*	4*d.*
,, if framed as in legs and bearers	3*d.*	3*d.*	4*d.*	4*d.*	6*d.*	6*d.*
,, if rebated or grooved or beaded	½*d.*	½*d.*	½*d.*	½*d.*	½*d.*	½*d.*
,, if chamfered or rounded edges				1½*d.*		
,, if moulded in architraves, capping, etc.				3*d.*		

DOOR FRAMES— Per foot run— Per sectional inch—	6in	8in	10in	12in	13½in
Softwood, wrot, rebated, rounded framed and fixed	2/-	2/4	2/10	3/2	3/4

DOORS—Per foot super. Number of panels— 2in. Softwood,	1	2	3	4	5	6
square framed and flat panels, both sides, on butts ..	5/4	6/4	6/10	7/6	7/9	8/6
1½in do.	4/6	5/4	5/10	6/4	6/7	7/1
Add for each side moulded	4*d.*	5*d.*	6*d.*	7*d.*	8*d.*	9*d.*
Add for do. flush panelled ..	8*d.*	8*d.*	8*d.*	6*d.*	7*d.*	7*d.*

per foot super— In shelves, table tops, wrot and fixed	⅝in 2/3	1in 2/6	1¼in 2/11	1½in 3/5
Do. in divisions and ends framed ..	2/5½	2/8½	3/1½	3/9½
Add if crosstongued	6*d.*	6*d.*	6*d.*	6*d.*
Add if buttoned	6*d.*	6*d.*	6*d.*	6*d.*

SUNDRIES—Per foot run ..	In short lengths	In long lengths	Add for cups and screws
Glazing, beads mitred around and fixed with brads ..	6*d.*	4*d.*	2*d.*
Rounded heel or hollow ..		4*d.*	
Tongued and grooved angle		6*d.*	
Glue blocking		6*d.*	
Mitres	3*d.*	per sectional inch.	
Fitted ends	2*d.*	do.	

STAIRCASE—	Per ft Super
1¼in Softwood treads with moulded nosings. 1in risers tongued both edges and glued, blocked and bracketed on and including two fir framed carriages	5/-
Do. but in winders	6/2
1¼in crosstongued landing on framed carriages ..	5/-
2in moulded string	4/10
2in do. ramped	11/2
Ends framed to newel	9/- each
Tongued and mitred angles	4/11 do.
Tongued heading joints	4/11 do.
Ends of treads and risers housed to string	3/6 do.
Extra for curtail ends to steps, glued up and veneered riser and solid blocking	95/- do.
Balusters about 2ft 9in long, square and framed each end .. .. .. each	1in 3/5 / 1¼in 4/- / 1¼in 4/6
3½in × 3½in square newel, framed	3/9 per foot run
African mahogany moulded 3in × 2in hand-rail. (Joints below)	8/- do.
Do. ramped 18in girth (do.)	49/- each
Do. wreathed do. (do.)	146/- each
Joint or framed ends	10/6 each

FIXING ONLY IRONMONGERY	To deal	To hardwood
Barrel bolts	1/6	2/3 each
Flush bolts	3/8	4/6 do.
Sash fasteners	2/1	2/8 do.
Rim locks and furniture	5/-	6/3 do.
Mortice locks and do.	10/-	15/6 do.
Cupboard locks	2/7	3/2 do.
Casement fasteners	2/1	2/7 do.
Do. stays	2/1	2/7 do.
Grip handles	2/5	3/2 do.
Spring catches	2/1	2/7 do.
Cabin hooks	1/8	2/3 do.
Floor springs including oil	44/-	55/- do.
Overhead springs	12/8	15/- do.
Springhinges	10/-	12/- do.

SMITH AND FOUNDER

Basis framed steel joists and hoist and fix	68/-	per cwt.
Do. but in compound girders ..	75/-	do.
Do. but in stanchions	76/-	do.
Trusses	105/-	do.
Additional cost per cwt. over basic sections for following R.S.Js. 9in × 7in, 10in × 8in, 12in × 8in, 14in × 8in, 16in × 8in, 18in × 6in, 18in × 7in, 20in × 6½in, 20in × 7½in ..	7d.	per cwt.
22in × 7in, 1/1 cwt. 4in × 3in	1/8	do.
5in × 3in, 5in × 2½in	2/-	do.
6in × 3in, 24in × 7½in	2/3	do.
3in × 3in, 2/9 cwt. 4½in × 1½in ..	3/7	do.
3in × 1½in	3/11	do.
Cleats, brackets, packing pieces, etc., in connections, including rivets and bolts	150/-	do.
Forged straps	108/-	do.
Wrot iron balustrade	145/-	do.

RAINWATER GOODS—

		Per foot lineal 2in	3in	4in
Round cast-iron pipe with socketed joints caulked with red lead and tow and fixing with pipe nails and gas barrel distance pieces to plugs in brickwork		3/5	4/-	5/2
Extra for shoes	each	5/-	6/4	9/1
Do. junctions	do.	7/6	9/7	13/10
Do. bends	do.	5/10	7/6	9/8

RAINWATER GUTTERS Per foot run—	4in	5in	6in
Half round CI gutters jointed in red lead and bolted and fixed on iron brackets	3/3	3/11	5/-
Ogee do. All as last	3/7	4/1	5/3
Extra for stop ends	3/-	3/8	4/-
Do angles or outlets	5/4	6/9	8/-

MEASURED RATES—*Continued*

PLUMBER

EXTERNAL—	Soakers	Flats	Flashings
4lb Milled Sheet lead per cwt	180/–	213/–	223/–

LEAD PIPES: running joints, etc.

Per foot run	½in	¾in	1in	1¼in	1½in	2in
Main, Service, Waste } Fixed with hooks	5/–	7/–	9/9	12/5	15/6	21/6
	4/5	6/1	8/1	10/–	13/5	17/2
	3/–	4/2	5/6	6/9	8/8	11/2
Bends each	—	—	—	1/9	3/–	8/–
Solder joints ,,	8/1	9/7	11/4	12/11	15/1	20/4
Union and joints ,,	12/10	16/5	21/1	28/1	—	—
Stop valve and *ditto* ,,	28/11	37/7	51/10	80/9	—	—
Bib valve and *ditto* ,,	20/8	28/–	—	—	—	—
Ball valve and *ditto* ,,	22/6	31/7	49/5	71/11	—	—
Sleeve and *ditto* ,,	—	—	—	—	21/3	28/9

COPPER TUBES

	½in	¾in	1in	1¼in	1½in	2in
Tubes per foot run ..	3/2	3/9	5/1	5/11	6/10	9/10
Couplings: straight each	3/2	4/–	5/11	7/9	9/11	13/4
Do. Bends each ..	6/3	7/6	10/7	14/4	21/5	29/7
Do. Tees ,, ..	7/5	8/8	12/7	17/2	23/2	32/5
Do Cisterns ,, ..	4/2	5/6	7/3	9/3	12/10	16/10
Stop cocks ,, ..	22/6	32/3	58/6	97/–	148/–	224/–

BLACK TUBING (Class C) fixed with pipe brackets	½in	¾in	1in	1¼in	1½in	2in
Tubes, per foot run ..	1/9	2/1	2/7	3/3	3/10	5/1
Bends and fix, each ..	3/10	4/7	5/7	7/3	8/2	12/8
Tees and *ditto*	4/–	4/9	5/9	7/5	9/–	13/4
Fire bends	1/5	1/9	1/10	2/1	2/9	4/10

	2in	4in	
Coated iron (M) weight L.C.C. soil and waste fixed with nails and distance pieces and molten lead joints	4/10	7/–	foot run
Extra only for bends and joint ..	12/10	21/2	each
Do. junctions and joints	14/4	26/7	do.
Do. cleaning doors	14/4	15/8	do.
Domical wire guards	2/6	2/9	do.

PLASTERER—			yard super
Lime and hair	½″	Render and set	6/–
Do.	⅜″	Ditto float and set	7/6
Sirapite	½″	Skimming coat	3/8
Do.	⅝″	Render and set	7/4
Do.	⅞″	Render float and ditto ..	9/–
Portland	½″	Backing coat	4/2
Do.	⅝″	Plain face	7/4
Do.	¾″	Floor screed	4/6
Keenes	½″	Skimming coat	4/9
Dubbing	¾″	Thick or less	2/–
Metal lathing	⅜″	mesh × 24 Gauge	5/7

6″ × 6″ × ¼″ Earthenware Plain Glazed Tiles, in fair quantity, white, and setting (on prepared screed) .. 38/–
Rounded edge. Extra over last .. 4d. per foot run.
Angles in ditto .. .. .. 4d. each
Cutting and fitting. Around pipes or clips 1/– ditto
Narrow widths. 3″ to 6″ wide. Add 75% to plain surface.
Ditto. 6″ to 12″ ditto. Add 40% to plain surface.
Sundry labours per foot linear:—
Quirk 2½d. Arris 3½d. Fair edge 2½d. Rounded edge 4d.
Flush bead 1/5.
Mouldings—5d. per inch girth.
Jointing new plastering to old 3d.

POLISHING		Sashwork
NEW WORK—	Foot super	Foot run
Staining, bodying-in and French Polish	2/6	1/7
Staining and wax polishing on hardwood	1/1	9d.
OLD WORK—		
Cleaning down old work and repolish ..	1/–	—
Stripping, preparing and repolishing ..	2/9	1/11

INTERNAL PAINTING

With white lead base in common colours, with brushes.

	Knot stop and prime	Prime and paint once	Prime and paint twice	Add for each extra coat	
ON WOOD—					
General surfaces ..	2/5½	4/9	6/6	1/9½	Yard super
Running lengths not exceeding 3″ wide	3½d.	7d.	9½d.	2½d.	Yard run
Do. 3″ to 6″ wide ..	5d.	9½d.	1/0½d.	3½d.	do.
Do. 6″ to 9″ wide ..	7½d.	1/2½	1/7½	6d.	do.
Do. 9″ to 12″ wide ..	10½d.	1/6½	2/1	7d.	do.
Sash square each side	5/–	8/9	11/6	3/–	per doz.
Do. in large squares	7/3	12/3	16/8	4/4	do.
Opening edges ..	7d.	1/2	1/9	7d.	each
Casement frames each side	4½d.	8½d.	1/–	3d.	Yard run
Mullions or transoms, do. ..	6½d.	11½d.	1/3	4½d.	do.

ON PLASTER—	One coat	Two coats	Three coats	
Paint on surfaces	2/7	4/11	6/8	Per Yard super
Do. on mouldings	3/–	5/6	7/4	do.
Do. on enrichment	4/7	8/8	11/3	do.
ON STEEL—				
Paint on structural steel ..	2/–	3/10	5/5	do.
Do. on roof trusses	3/4	6/6	8/11	do.
Do. on metal windows measured over all on both sides, divided into squares	3/1	5/3	7/5	do.
Do. divided into large squares	2/7½	4/6	5/10½	do
Do. divided into extra large squares	2/2½	3/9	5/–	do.
Do. on opening edges ..	9¾d.	1/5½	1/11	each
Do. on rain water pipe ..	9d.	1/6	2/–	Yard run
Do. on do. gutter	1/2	2/6	3/5	do.
Do. on small pipe	3d.	6d.	9d.	do.

GLAZING (to New Work)

Polished Plate Glass ordinary substance (about ¼in), glazing quality, in the following sizes, glazed complete—Per foot super

In plates not exceeding	2 feet	super	in each ..	4/10
Do.	5 feet	do.	..	5/8
Do.	45 feet	do.	..	6/4
Do.	100 feet	do.	..	6/9

Add extra price for glazing with screw beads or clips 3d. per foot super.
Do if glazing bedded in washleather or velvet 6d. per foot run.

SHEET GLASS, glazed, complete, per foot super, in new work:	24 oz	26 oz	32 oz
Ordinary quality clear glazed to wood with putty in areas of 100 feet super in the aggregate ..	1/10½	2/1	2/4
Do. 200 feet do.	1/8	1/10	2/1
Do. 500 feet do.	1/6½	1/8½	1/11½
Figured rolled and Cathedral, glazed to wood with putty in 100 foot super areas in aggregate.	Per foot super		1/11½
Do. in standard tints	do.		2/7½
Fluted, glazed do.	do.		2/4½
Reeded (narrow, broad, etc.) do. ..	do.		2/4
Reedlyte do.	do.		2/4
Spotlyte do.	do.		2/3
¼in Rough cast do.	do.		2/2½
¼in Do. wired do.	do.		2/6
¼in Georgian Rough Cast do. ..	do.		2/5½

Add for glazing all as before but to steel to similar work a above, 2d. per superficial foot.

PAINTER AND DECORATOR

DISTEMPERING—In common colours, put on with brushes—

ON PREPARED SURFACE. per yard super—	1 coat (finish)	2 coats (undercoat and finish)	*Add* if required for Sealing coat	*Add* if required for Stippling
Ordinary distemper on flat surface of plaster	8d.	1/3	5½d.	2d.
Washable do. on do. of plaster	10½d.	1/8½	5d.	2d.
Add if in margins, narrow widths or panels	30%	30%	20%	50%
Add if on mouldings	50%	50%	45%	—
Add if on enrichments ..	160%	160%	115%	—

PAPERHANGING

Hanging only—	Per Piece— Lining	Pattern
On walls	6/6	7/9
On stairs	8/10	10/4
On ceilings	7/9	9/1

ELECTRIC LAUNDRIES

THE ELECTRIC HOME LAUNDRY

In the great majority of homes throughout the country laundry work of some kind is undertaken regularly, the number and types of articles washed, dried and ironed depending on the individual requirements of each home. It is not surprising, therefore, to find that a wide range of electrical equipment is available, capable of handling anything from a few light articles to the heavy weekly wash of a large family. The type of appliance used and the space needed to accommodate it has not received the attention it deserves in the planning of houses and flats, and so these notes have been written to indicate briefly what is involved.

Laundry or Utility Room

Much depends on the bulk and frequency of the laundry work undertaken. If there are small children or babies in the family, washing will have to be done frequently, though not necessarily in large quantities : the heaviest washes are undertaken in large families where the bed linen is regularly washed at home as well as personal articles. In both cases normal kitchen work would be seriously interfered with if all this laundering had to be done there : it is far better to arrange the laundry equipment in a separate room adjacent to the kitchen. The space required is not great—an enlarged back porch as shown in Fig. 1 can be quite satisfactory.

If more space is available, the laundry equipment may be placed in a utility room which can also be used for the many odd jobs that require doing but should not be done in the kitchen. Alternatively, the utility or laundry room can be made large enough to take a chair and large steady table for sewing and mending, with accommodation for a sewing machine and ironer, and space for airing and sorting linen. All this work has to be done in one way or another in every household, yet it is often completely overlooked at the planning stage.

Laundry Appliances in the Kitchen

When circumstances determine that the household laundry work must take place in the kitchen, the appliances must be properly integrated in the layout so as to be capable of proper use without disrupting the working sequence of the kitchen proper. This has been made much easier by the introduction of the fully-automatic washing machine, which does its work without mess, steam or labour, and the modern electric drying cabinet or cupboard; both appliances are perfectly suitable for use in a working kitchen. Fig. 2 shows how they may be incorporated in a layout that is efficient as a kitchen as well as a laundry.

Other types of washing machine can of course be used in the kitchen for the weekly wash: if they are of the standard size (see Table 1) they may be kept at one end of the working area and brought forward to the sink for use as shown in Fig. 3. Smaller machines can be stood under a draining board or working counter when not in use.

Electric Washing Machines

There are three main types of electric washing machine. First, the small ones which take up to 5 lb. dry weight of clothes and wash them electrically, but have a hand wringer fitted. Second, the so-called standard type, which is larger, can take 6-10 lb. dry weight of clothes at a time and has a power wringer. Many small and standard size machines have a built-in pump and hose for emptying; some models are also fitted with electric heaters for boiling the clothes if required. The standard type of machine (with a few

TABLE 1 WASHING MACHINES

		Small type	Standard type	Automatic
Height without wringer	in.	28—36	32½—36	38
Height with wringer	in.	35—46	42½—47½	—
Width	in.	16—23	21—24	26
Depth	in.	15½—21	21—24	22½

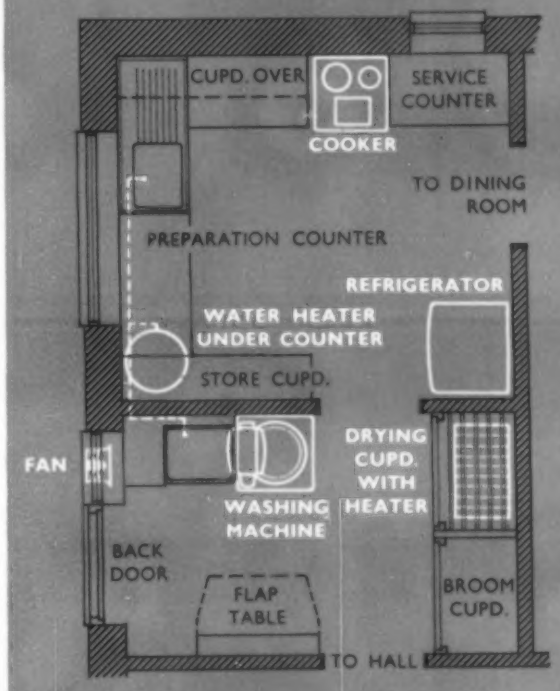


Fig. 1 Laundry room and kitchen

SCALE : 4 FEET EQUALS 1 INCH

TABLE 2 CLOTHES DRYERS

	Height	Width	Depth
Small cabinets	3'—4'6"	1'6"—1'10"	1'1"—1'10"
Standard cabinets	6'	1'8"—4'0"	1'2"—2'1"
Tumbler dryers	3'	2'2"	2'0"

EL.1

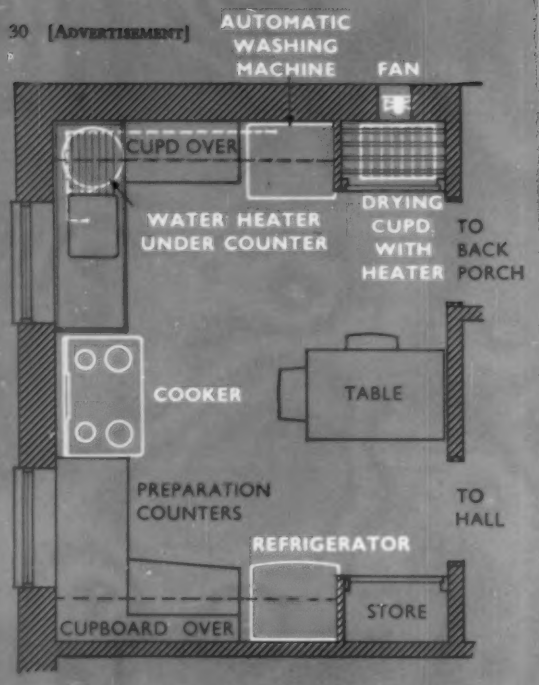


Fig. 2 Laundry kitchen
with automatic washing machine

SCALE: 4 FEET EQUALS 1 INCH

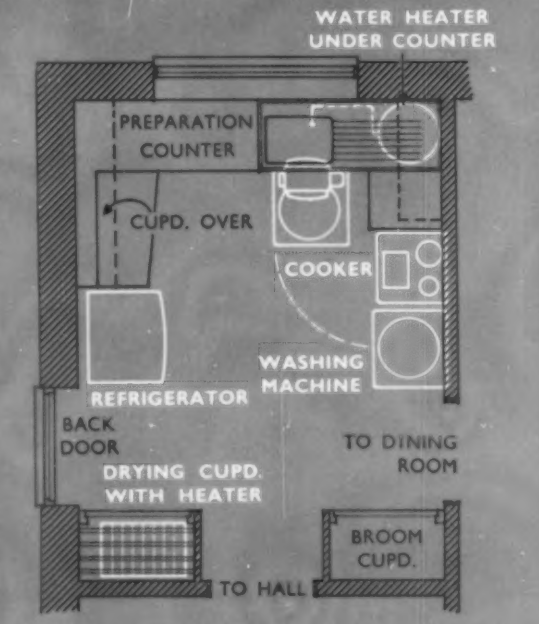


Fig. 3 Working kitchen
showing standard type washing machine in use

SCALE: 4 FEET EQUALS 1 INCH

exceptions) is too large to stand under a draining board. Its electrically driven wringer is detachable, and a rotary ironer can be fitted in its place. The third type is fully automatic, takes 8 or 9 lb. dry weight of clothes at each filling, and washes them, rinses them, and spins them in a container until they are as dry as if they had come through a wringer. The clothes are not touched after they have been put in, until they are taken out damp-dry after the machine has switched itself off. The automatic machines require permanent connection to hot and cold water supplies, and discharge direct into a gulley. In all cases an ample and efficient supply of hot water is essential, but there is no difficulty in providing this with electricity (see WH.1,2,3,4).

Clothes Drying

A week's wash can be dried independently of the weather to the correct degree for ironing, in an electrically-heated drying cabinet or cupboard, in a few hours. The same appliance can be used for drying off wet outer clothing, and is essential if home laundry is to be undertaken in a flat.

Drying cabinets use an electric heater controlled by a three-heat switch, enabling different materials to be dried at the proper rate. The heater is in the base and is screened by a wire-mesh guard, air being drawn in at the bottom, and discharged at the top of the cabinet. When a cupboard is built for clothes drying, as shown in Figs. 1, 2 and 3, it should be lined internally with hard plaster (painted), glazed sheet asbestos, or a similar non-absorbent material. The floor area should be not less than 4 square feet, and gaps for the entry and exit of air should be provided below and above the door which should be faced internally with a non-absorbent material. An electric heating unit made for the purpose is fixed in the bottom of the cupboard, switched and guarded as in a drying cabinet. A small extract fan may be fitted with advantage in the drying cupboard when the latter forms part of a kitchen (Figs. 2 and 3) or otherwise in the laundry room itself (Fig. 1).

Tumbler drying is the newest method of drying clothes at home. The compact machines with automatic timers are about table height and will take a load of clothes from a standard washing machine. The clothes are tumbled in hot air until they are dry enough for ironing or completely dried, when the machine switches itself off.

Irons and Ironing

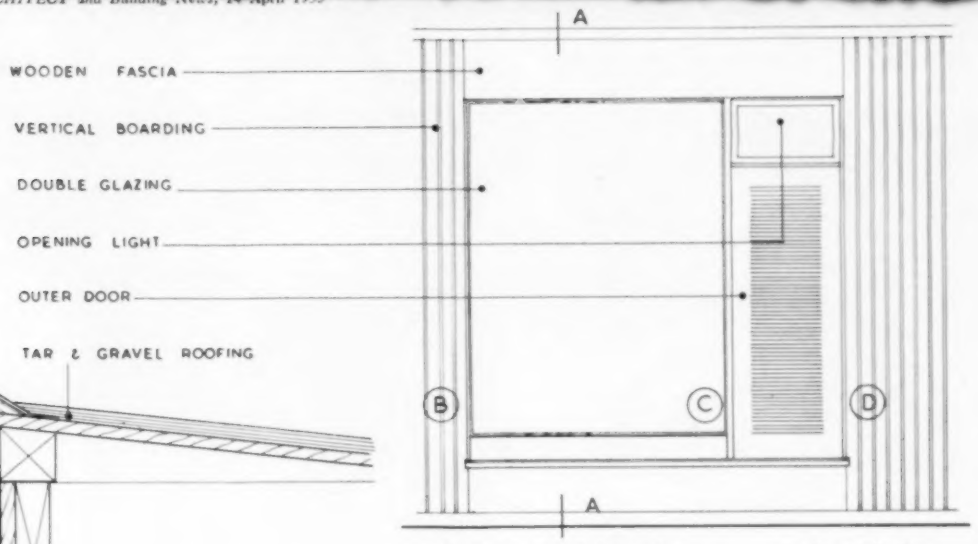
Ironing is a very important process in every home, a considerable time being spent on it each week, often under very unsuitable conditions. If the regular wash includes sheets, pillow cases, etc., as well as the usual personal articles, an electric rotary ironer (of the independent table type or fitted in place of the wringer on a washing machine), or press type ironer, will probably be required. These appliances can be operated sitting down, and sheets, towels, pillow cases, etc., run through with speed and efficiency: they can also be used for many other articles.

For hand ironing, a rigid portable ironing board is essential—together with the space necessary to store and use it; there are many articles for which it is not so convenient. A strong firm table should be provided in the laundry room for ironing and pressing, and for the use of a portable sewing machine: it should be 2′ 6″ high with an adjacent socket-outlet, fixed at 4 feet from the floor, for an electric hand iron, ironer or sewing machine. Good lighting, both natural and artificial, must also be provided.

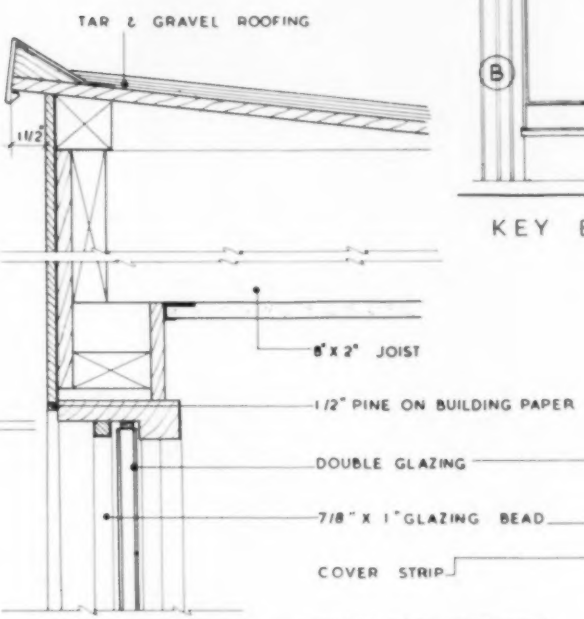
For further details apply to

EL.1 British Electrical Development Association

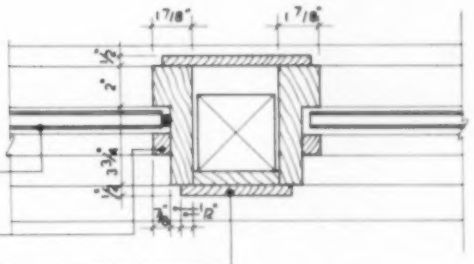
2 Savoy Hill, London, W.C.2. Temple Bar 9434



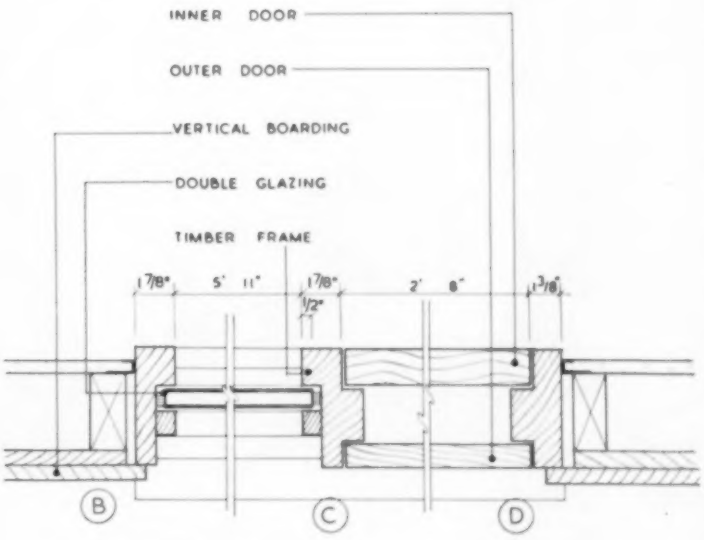
KEY ELEVATION • 1/4" TO 1' 0"



SECTION A-A • 1/8 F.S.



DETAIL OF MULLION TO END WINDOW • 1/8 F.S.



PLAN DETAILS • 1/8 F.S.

Photo: Ezra Stoller

WINDOW DETAIL: HOUSE AT MAINE

ARCHITECTS: CHERMAYEFF & CUTTING

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Cork has many advantages, apart from its rich, natural beauty. It is quiet, warm and comfortable underfoot; with the minimum of attention Armstrong Cork Tile floors will last a lifetime. Cork harmonises well, both with traditional and contemporary schemes of decoration and furniture. Above all, cork makes an economical flooring surprisingly low in first cost.
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* * *

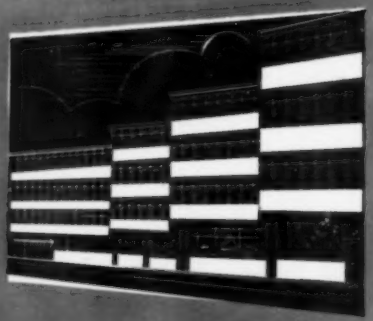
Sizes: 12" x 12", 36" x 12", 36" x 6", 9" x 9", 6" x 6". Special sizes cut to order up to maximum of 36" x 12". Thicknesses: 3/16" square edge or bevelled edge. 5/16" tongued and grooved or square edge. Shades: Light, Medium, Dark. Coved Skirting: 5/16" thick, in lengths of 36", 4" high, ¼" radius cove.

ARMSTRONG'S *Cork Tile* FLOORS

ARMSTRONG CORK COMPANY LTD., Flooring Department, Bush House, Aldwych, London, W.C.2. *Tel: COVent Garden 1101*

'THE Decorplast'

STRUCTURAL PANEL



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HEAD OFFICE & WORKS: NEW HYTHE, NEAR MAIDSTONE, KENT

New high output MARVEC Fire

heats up to 2,250 cu. ft. and supplies hot water

SPECIFICATION Vitreous enamelled cast-iron fire front. Combined hook-on trivet and extension piece. Plain cast-iron interior sealing frame to fit behind tile or precast surround. Firebrick lined firebox; removable bottom grate; restrictable throat.

Wrought welded or copper boiler with 1 in. connections on top. Sealing rings for pipes passing through casing. Self-contained boiler flue and damper and lift-off back-plate. (Cast-iron interior frame, enamelled to match fire front, can be supplied.)

COLOURS Beige mottle or black. Allustre A2. Alisheen black, bramble, bronze or copper. Hook-on trivet — black vitreous enamel.

STRUCTURAL OPENING

Minimum Dimensions

Width :	20 ins.
Depth :	13½ ins.
Height from hearth level to underside of lintel :	33 ins.

Alternative adaptors are available to suit tile surrounds with 2⅜ ins. and 4⅜ ins. return to wall.

FIRE OPENING IN SURROUND

Width :	16 ins.
Height :	22 ins.

GAS IGNITION Connections ¾ in. B.S.P. on either hand. Provision can be made for a concealed gas connection.

SPACE HEATING CAPACITY If provision is made to introduce convected air to the living room, a room of 2,250 cu. ft. can be heated.

If convected air is used for warming other rooms, full heating up to 1,750 cu. ft. is provided, and background warmth for other rooms up to a total of 2,000 cu. ft.

Note: These figures apply to rooms of normal construction.

BOILER OUTPUT Maintainable maximum 9,000 B.Th.U. per hour.

Provided the system is compact the boiler can heat a towel rail in addition to supplying domestic hot water. If the boiler is not used to provide domestic hot water, 45 sq. ft. of radiation surface (including unlagged piping) can be heated.

HOT WATER SYSTEM The recommended size of cylinder is 30 gallons (direct or indirect). The cylinder must be lagged and should be fixed vertically as near as possible to the boiler. In no case must flow and return pipes exceed 30 ft. each in length. Pipes longer than 15 ft. must be lagged. The draw-off pipe to the taps must be a dead leg connection from the expansion pipe.

The fuel-saving RESTRICTABLE THROAT

... a curved plate in the flue outlet. Adjustable so that chimney throat can be wide or narrow. It effectively controls room ventilation, saving heat and eliminating draughts.

For further details of the Marvec Fire write to the Housing Division of:—

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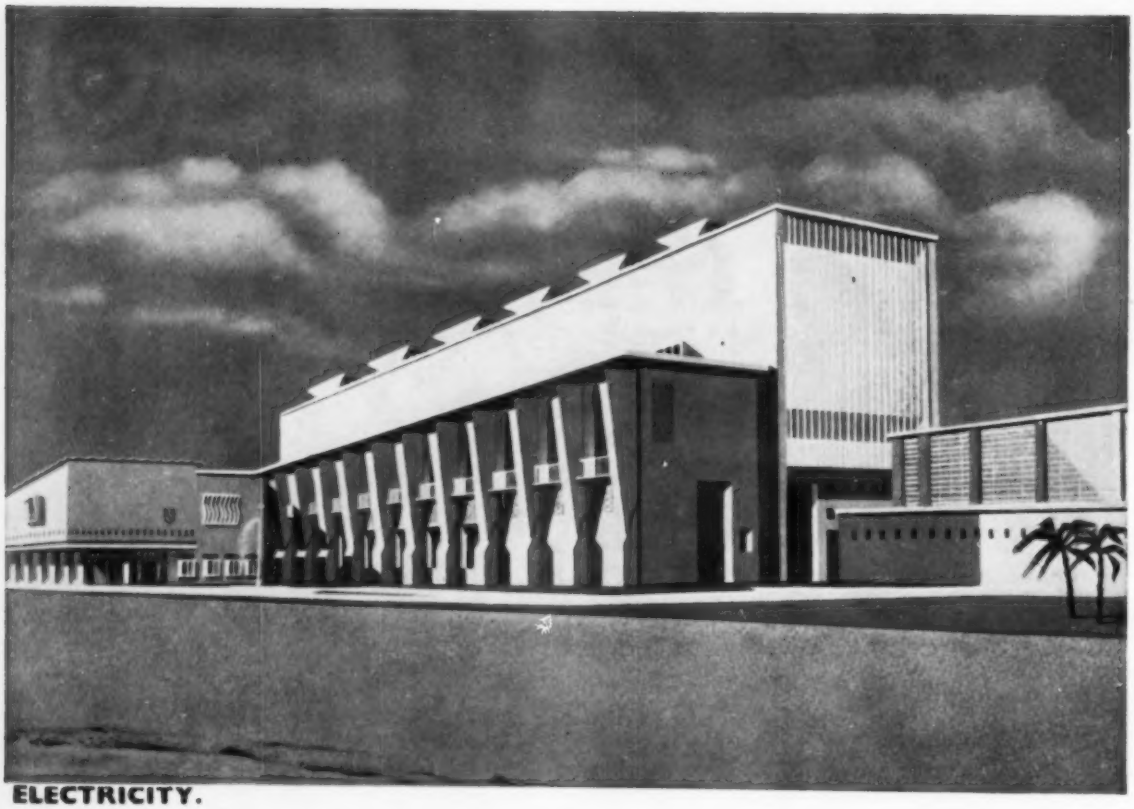

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CONTRACT • NEWS •

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

OPEN

BUILDING

ALTON R.C. (a) 4 dwellings with ancillary site works, Babs Field site, Bentley. (b) Council's Engineer, Council Offices, Barton End. (c) 3gns. (e) May 4.

• • •

ASHBOURNE U.C. (a) Erection of a shop, Park Estate. (b) Council's Surveyor, Council Offices. (e) April 30.

• • •

BIRMINGHAM C.C. (a) Public convenience, Walmer Recreation Ground, Elkington Street, Aston, Birmingham, 6. (b) General Manager, Parks Department, Civic Centre, Broad Street, 1. (c) 2gns. (e) May 7.

• • •

BORDER R.C. (a) Conversion of Nos. 6, 8 and 10, Bridge Street, Longtown, into 2 houses. (b) Housing Officer, 5, Victoria Place, Carlisle. (c) 2gns. (d) April 18.

• • •

CARLISLE C.C. (a) Erection of (1) 100 houses, (2) 10 houses, (3) 20 houses, (4) 20 houses, (5) 50 houses and (6) 10 houses, Morton. (b) City Surveyor, 18, Fisher Street. (e) £2. (e) May 7.

• • •

CHICHESTER C.C. (a) Erection of 21 brick and concrete stalls, together with ancillary stores, stallholders' conveniences and decorative work to the existing building at Butter Market. (b) City Engineer, "Greyfriars," North Street. (c) 5gns. (e) April 25.

• • •

CLARE R.C. (a) 4 bungalows, 2 houses and site works, Stradishall. (b) Council's Engineer, Stonehall, Clare, Sudbury, Suffolk. (c) 2gns. (e) April 22.

• • •

EAST SUSSEX C.C. (a) 4 new classrooms, assembly hall, dining hall and kitchen for extensions to Bexhill Grammar School. (b) County Architect, County Hall, Lewes. (d) April 16.

• • •

ESSEX C.C. (a) Erection of library at St. Nicholas Avenue, Elm Park, Hornchurch. Approx. cost £6,500. (b) County Architect, County Hall, Chelmsford. (d) April 16.

• • •

HALSTEAD U.C. (a) 50 houses, 13 garages and ancillary services, Park Fields Estate. (b) A. E. Wiseman, 10, Duke Street, Chelmsford. (c) 3gns. (e) April 25.

• • •

LEICESTER C.C. (a) Minor alterations and maintenance works at Enderby House, County Home, Narborough. (b) County Architect, 123, London Road, Leicester. (c) 2gns. (e) April 25.

• • •

LOWESTOFT B.C. (a) Erection of conveniences at Lowestoft Cemetery, Rotterdam Road. (b) Borough Engineer, 49, High Street. (c) 1gn. (e) April 22.

• • •

PORTSMOUTH C.C. (a) Erection of fire brigade headquarters, Copnor Road. (b) City Architect, 1, Western Parade. (c) £1. (d) April 29.

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READING B.C. (a) Conversion of woodwork classrooms at New Town School, and extension and conversion of art classroom at Alfred Sutton School. (b) Messrs. Sainsbury and Chamberlain, 14, Cross Street. (c) 2gns cheque payable to Corporation. (e) May 4.

* * *

SITTINGBOURNE AND MILTON U.C. (a) Erection of (1) 44 dwellings, and (2) 42 dwellings, North Court Estate. (b) Council's Engineer, Central Avenue, Sittingbourne. (c) 3gns. (e) April 25.

* * *

SWANSEA B.C. (a) 232 dwellings, Bonymaen Estate. (b) Borough Architect, The Guildhall. (c) £5. (d) April 18.

* * *

WASHINGTON U.C. (a) 78 houses, Coach Road site. (b) Council's Engineer, Council Chambers, Washington, Co. Durham. (c) 3gns. (e) May 9.

* * *

WEST RIDING OF YORKSHIRE C.C. (a) Proposed extensions at the Rawdon Fire Station. (b) County Architect, "Bishopgarth," Westfield Road, Wakefield. (e) April 22.

* * *

WEST RIDING OF YORKSHIRE C.C. (a) Proposed improvement to the appliance room entrance, Silsden Fire Station. (b) County Architect, "Bishopgarth," Westfield Road, Wakefield. (e) April 22.

* * *

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

BRITISH ELECTRICITY AUTHORITY. (1) Building and civil engineering works at power stations. (2) Nottingham. (3) Taylor Woodrow Construction Co., Ltd., Southall. (2) East Yelland, Barnstable. (3) Tileman and Co., Ltd., Romney House, Tufton Street, London, S.W.1. (2) Lincoln. (3) Wm. Moss and Sons, Ltd., Loughborough. (2) Barony, Ayr. (3) Bierrum and Partners, Ltd., 10, Sudbury Hill, Harrow, Middlesex. (2) Stella North and Stella South, Newcastle on Tyne. (3) Sir Robert McAlpine and Sons (Newcastle on Tyne), Ltd., Newcastle on Tyne.

* * *

LONDON, W. (1) Block of showrooms and offices. (2) Great Marlborough Street. (3) Gee, Walker and Stater, Ltd., 100, Park Lane, London, W.1. (4) £193,765.

* * *

WARE, HERTS. (1) Sterile block. (2) Ware, for Allen and Hanbury's, Ltd. (3) Kerridge (Cambridge), Ltd., 26-46, Sturton Street, Cambridge. (4) £155,000.

* * *

CAERNARVON C.C. (1) Technical College. (2) Bangor. (3) Williams and Williams, Ltd., Cae Mur, Caernarvon. (4) £100,000.

* * *

ACCRINGTON B.C. (1) 88 houses and flats. (2) Burnley Road. (3) William Townson and Sons, Ltd., Higher Swan Lane, Bolton. (4) £107,395.

* * *

NORWICH CITY COUNCIL. (1) 99 dwellings. (2) Heartsease Estate. (3) H. G. Lomax and Son, Ltd., School Lane, Sprowston, Norwich. (4) £129,553. (1) Junior school. (2) Heartsease. (3) Bush Builders (Norwich), Ltd., Mile Cross Lane, Norwich. (4) £68,300.

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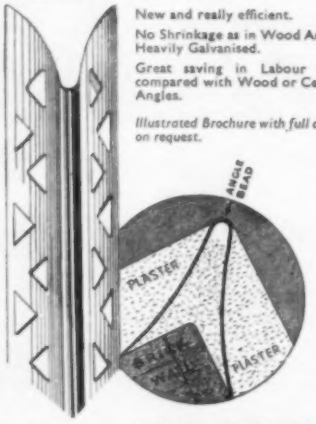

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Cast Iron base (wt 9 lbs.) 8/6

We will gladly submit sample lamp on Approval.

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YORK CITY COUNCIL. (1) 100 houses. (2) Chapel Fields Estate. (3) Sorrell (York), Ltd., of York. (4) £125,497.

* * *

BELVEDERE, KENT. (1) Biscuit warehouse for W. and R. Jacob and Co. (Liverpool), Ltd., Aintree. (2) Belvedere. (3) C. A. S. (Contractors), Ltd., 7, Drayton Gardens, London, S.W.10. (4) About £123,000.

* * *

CRAWLEY NEW TOWN. (1) Factory. (2) Industrial Estate. (3) E. H. Smith (Croydon), Ltd., 48, Wellesley Road, Croydon. (4) £230,500. (1) Factory. (2) Industrial Estate. (3) James Longley and Co., Ltd., East Park, Crawley, Sussex. (4) £92,987.

* * *

LONDON E.C. (1) Superstructure for re-development. (2) Brown's Buildings, 4-9, St. Mary Axe, E.C.3. (4) H. Fairweather and Co., Ltd., Hyde Works, St. James' Lane, London, N.10. (4) £134,000.

* * *

MANCHESTER. (1) Two factories. (2) Bent Street, Cheetham. (3) A Cassel and Sons, Ltd., 1-3, Teneriffe Street, Salford. (1) Factory. (2) Wythenshawe Estate. (3) Pochins (Manchester), Ltd., King Street, Middlewich, Ches.

* * *

LONDON, S.W. (1) Engineering building. (2) Imperial College of Science and Technology, Prince Consort Road, South Kensington, S.W.7. (3) J. Jarvis and Sons, Ltd., 239, Vauxhall Bridge Road, London, S.W.1. (4) £500,000.

* * *

HEBBURN-ON-TYNE U.D.C. (1) 100 houses. (2) Monkton Lane. (3) Direct Labour. (Surveyor: H. C. Bestow.)

* * *

WALTHAMSTOW B.C. (1) Technical school. (2) North Walthamstow. (3) J. and J. Dean, Ltd., 113, Ruckholt Road, Leyton, E.10. (4) £208,000.

* * *

TWICKENHAM B.C. (1) Central depot. (2) Craneford Way. (3) Walker (Tooting), Ltd., Hackridge, Wallington, Surrey. (4) £59,444.

* * *

ST. HELENS B.C. First instalment of technical college. (2) Brook Street. (3) Direct Labour Organization. (4) £145,000.

* * *

MANCHESTER REGIONAL HOSPITAL BOARD. (1) Twin operating theatre. (2) Crumpsall Hospital. (3) William Gornall and Sons, Ltd., Gore Street, Manchester 3. (4) £68,300.

* * *

LEAMINGTON SPA B.C. (1) Construction of a reservoir. (2) Campion Hills. (3) Henry Boot and Sons, Ltd., Eccleshall Road, Sheffield 11. (4) £89,936.

* * *

ROMFORD B.C. (1) 82 Cornish houses. (2) Harrow Crescent. (3) Selleck, Nicholls and Co., Ltd., St. Austell, Cornwall. (4) £102,761.

* * *

NORTH RIDING C.C. (1) Technical college. (2) Cleveland. (3) F. Shepherd and Sons, Ltd., Blue Bridge Lane, York. (4) £120,250. (1) School. (2) Cleveland. (3) A. Robinson (Contractors), Ltd., Linthorpe Road, Middlesbrough. (4) £39,979.

* * *

MIDDLESBROUGH B.C. (1) School. (2) Park End. (3) A. Robinson (Contractors), Ltd., Linthorpe Road, Middlesbrough. (4) £91,215.

LONDON, E.C. (1) Offices and showrooms for Merchant Taylors Company. (2) Upper Thames Street. (3) Higgs and Hill, Ltd., South Lambeth Road, S.W.8.

• • •

SUNBURY-ON-THAMES U.D.C. (1) 104 dwellings. (2) Upper Halliford. (3) J. Farmer (Builders), Ltd., Sunbury. (4) £138,464.

• • •

HEREFORDSHIRE C.C. (1) Girls' grammar school. (2) Ayleston Hill, Hereford. (3) Hiles and Mussell, Belmont Road, Hereford.

• • •

HENDON, N.W. (1) Synagogue. (2) Edgware. (3) Lawrence Kierman and Co., 18, Chilworth Street, London, W.2.

• • •

READING. (1) Offices for Friends' Provident and Century Life Office. (3) Collier and Catley, Ltd., St. Mary's Butts, Reading. (4) £50,000.

• • •

BIRMINGHAM CORPORATION. (1) Library. (2) Sheldon. (3) A. Pearce and Sons (Building Contractors), Ltd., Victoria Street, Birmingham, 9.

• • •

WHITBY U.D.C. (1) Reconstruction of fish quay. (3) J. G. Thompson and Sons, Fowler Street, South Shields. (4) £85,511.

• • •

BILLINGHAM U.D.C. (1) 99 "No Fines" houses. (2) Roseberry Road. (3) Geo. Wimpey and Co., Ltd., Orchard House, Newcastle-on-Tyne. (4) £135,788.

• • •

RAMSBOTTOM U.D.C. (1) 44 houses, 24 flats. (2) Tagg Wood. (3) J. E. France, Ltd., Peel Street, Manchester, 10. (4) £92,412.

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GLAMORGANSHIRE, MINISTRY OF WORKS. (1) Alterations and additions. (2) U.A.X., Sybil Street, Clydach. (3) Griff Davies & Co., Ltd., Paxton Yard, Swansea.

• • •

HAMPSHIRE, MINISTRY OF WORKS. (1) Erection of various buildings. (2) N.G.T.E., Pyestock. (3) Gilbert-Ash, Ltd., 2, Stanhope Gate, London, W.1.

• • •

MIDDLESEX, MINISTRY OF WORKS. (1) Erection of a Crown building. (2) Heath Road, Twickenham. (3) E. Gostling (Builders), Ltd., 81-85, Whitton Road, Twickenham.

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NOTTINGHAMSHIRE, MINISTRY OF WORKS. (1) Alterations to Accounts Branch. (2) H.P.O., Queen Street. (3) John Cawley, Ltd., Canal Street, Nottingham.

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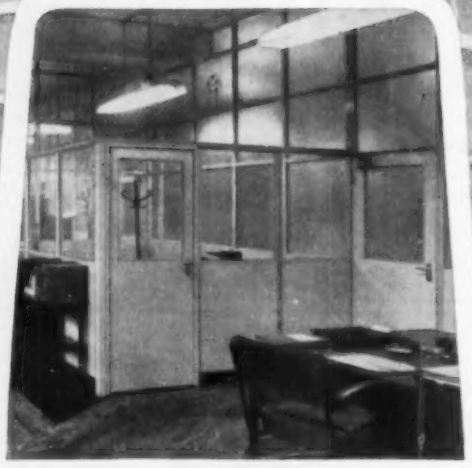

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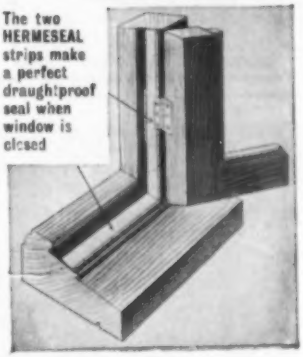

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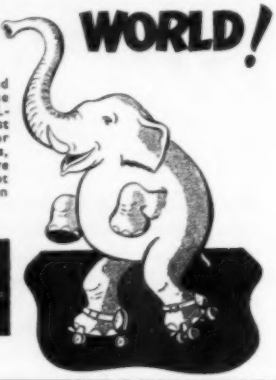

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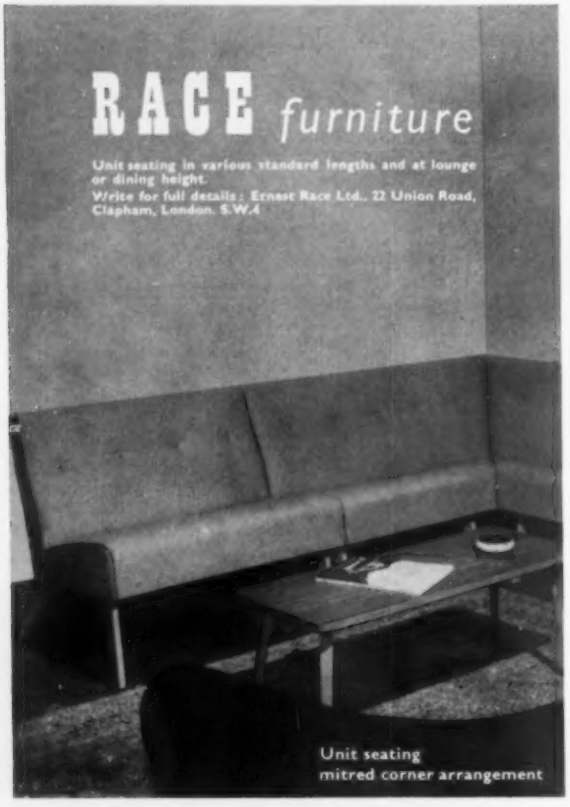

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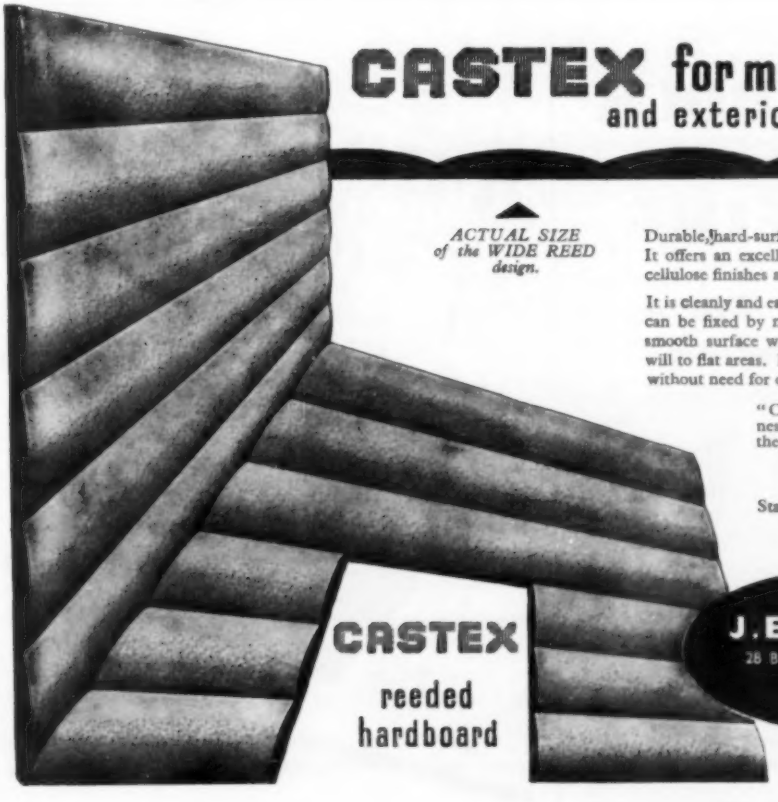

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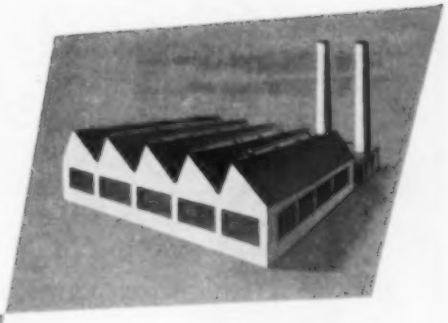

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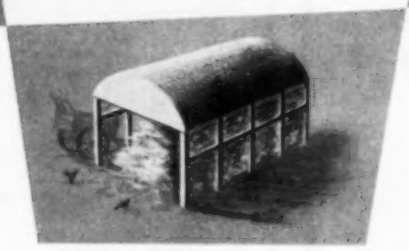

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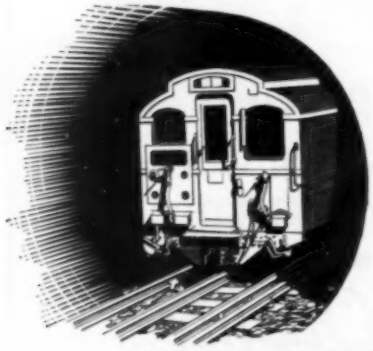

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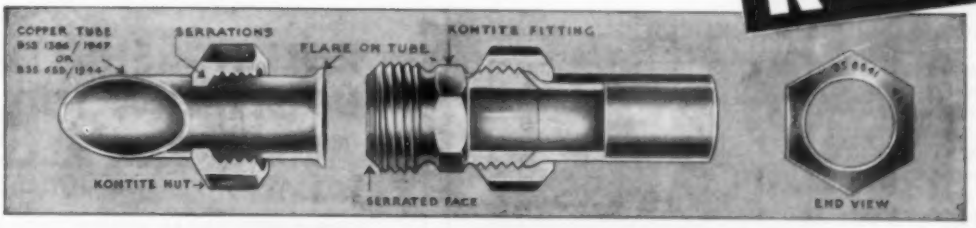

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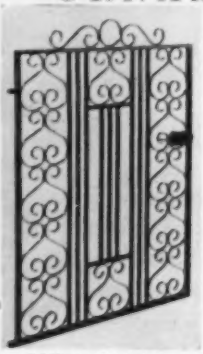

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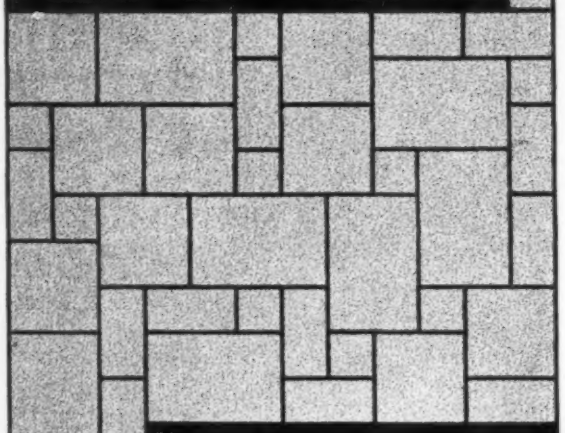

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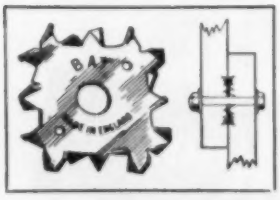

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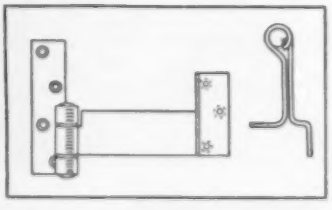

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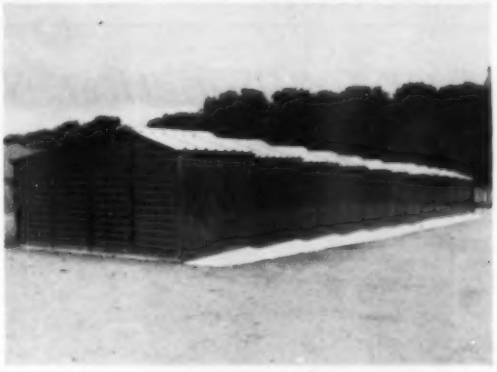

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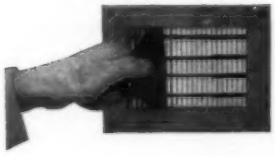

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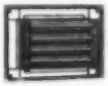

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SOUTHPORT AND DISTRICT WATER BOARD.

APPLICATIONS are invited for the appointment of an ARCHITECTURAL DRAUGHTSMAN at a salary on A.P.T. Grade II (£560—£640 per annum).

The appointment is for a period of not less than three years subject to satisfactory service.

Applicants must be competent draughtsmen having experience of building design and construction.

Applications, stating age, experience, qualifications, present and past appointments and accompanied by copies of two recent testimonials, should reach the Engineer and Manager, 14, Portland Street, Southport, not later than Tuesday, April 19, 1955.

R. EDGAR PERRING,
Clerk to the Board.
[9004

WELSH REGIONAL HOSPITAL BOARD.

ASSISTANT Architect required on the permanent staff of the Regional Architect, Maesycoed Road, Cardiff, at a salary of £625 × £25(7) × £30(3)—£890. The starting salary may be more than the minimum of this scale according to the candidate's professional experience.

The work will be interesting and helpful to a young architect anxious to make progress, and will include the preparation of sketch plans and working drawings of hospital buildings of a widely varied nature (e.g. ward units, operating theatres, X-ray and out-patient departments, kitchens, boiler houses, residences for medical staff, nurses' accommodation, villas for mental patients); alterations to existing buildings; inspection and preparation of reports on existing buildings; site surveys; preparation of specifications and supervision of works in progress.

Applicants must be Registered Architects, having passed the final examination of the R.I.B.A., with experience in the preparation of working drawings, specifications, surveying, levelling, supervision of contracts, etc. Previous experience in hospital work desirable but not essential.

The appointment is pensionable and terminable by one month's notice on either side.

Applications, stating age, experience, qualifications and present position, together with the names of two referees, should be addressed to the Secretary, Welsh Regional Hospital Board, Cathays Park, Cardiff, within 14 days of the appearance of this advertisement. [9051

[APPOINTMENTS—contd.

LONDON COUNTY COUNCIL, PARKS DEPARTMENT,

requires:—

(I) LANDSCAPE ARCHITECT. Recognized professional qualifications and extensive experience of preparation of working drawings and specifications and execution of work by contract. Commencing salary (on a scale £701 5s—£31 17s 6d—£892 10s) according to qualifications and experience.

(II) ARCHITECTURAL ASSISTANTS for preparation of working drawings and specification and supervision of work on site. Experience in landscape work and design an advantage. Salaries up to £688 10s.

(III) LANDSCAPE ASSISTANTS. Good knowledge of preparation of working drawings, schedules and specifications for park or garden reinstatement or new layouts to be executed under contract. Salaries up to £688 10s.

An extensive programme of construction of new parks and open spaces, the laying-out of grounds to new schools and housing estates and other types of ground work is in hand, and these positions provide exceptional opportunities for applicants desiring to extend their experience in this field and in architectural work in association with landscaping.

Application forms from Chief Officer of the Park Department (A.1), Old County Hall, Spring Gardens, S.W.1 (WHItehall 3121, Ext. 33). (420.)
[9031

URBAN DISTRICT OF ELLESMERE PORT.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

APPLICATIONS are invited from qualified and experienced men for the above appointment on the permanent salaried staff of the Engineer and Surveyor to the Council. Applicants must have had considerable experience in design and construction, particularly in relation to housing. The salary to be offered will be within Grade III of the A.P.T. Division of the National Salary Scales (£625—£725 per annum). The weekly tenancy of a Council house will be offered to the successful applicant on appointment if he reasonably requires housing accommodation for his family.

Applications, stating age, qualifications and experience, on the Form provided, which may be obtained on application to the Council's Engineer and Surveyor, together with the names and addresses of two persons, having knowledge of the applicant's experience and antecedents, to whom reference can be made, must reach me by not later than April 23, 1955.

Council Offices, P. J. Hodges,
Ellesmere Port. Clerk of the Council.
April 6, 1955. [9028

BOROUGH OF CHELTENHAM.

APPOINTMENT OF TWO SENIOR ARCHITECTURAL ASSISTANTS.

APPLICATIONS are invited for the above appointments (salaries within Grade A.P.T. IV—£675 to £825 per annum) on the Capital Works Establishment.

Applicants must be Associate Members of the R.I.B.A., or equivalent, and experienced in the design of Public Buildings, Housing and Ancillary Buildings in connection with Estate Development.

The appointments are subject to the National Conditions of Service; to the Superannuation Acts; and to a medical examination, and will be terminable by one month's notice on either side.

Applications, endorsed "Senior Architectural Assistant," stating age, training, qualifications and experience of present and previous appointments, and giving the names of two referees, are to reach Mr. G. Gould Marsland, M.B.E., B.Sc., M.Inst.C.E., Borough Surveyor, Municipal Offices, Cheltenham, not later than Monday, April 18, 1955.

F. D. LITTLEWOOD,
Town Clerk.

Municipal Offices,
Cheltenham.
March 26, 1955. [9001

APPOINTMENTS—contd.

NATIONAL COAL BOARD— EAST MIDLANDS DIVISION.

ARCHITECTS DEPARTMENT, MILTON STREET, NOTTINGHAM.

APPLICATIONS are invited for the following permanent and superannuated appointments. Superannuation rights under Local Authority Schemes are transferable.

S.V. 387—Architects Grade II.
Salary £600 × £25—£650 × £30—£900. Candidates should be Corporate Members of the R.I.B.A.

S.V. 388—Architectural Assistants Grade I.
Salary £525 × £25—£650 (exceptionally to £800). Candidates should be of R.I.B.A. Intermediate Standard and have had not less than 3 years' subsequent practical experience. Facilities are granted in certain circumstances to Assistants for part-time study at the Nottingham School of Architecture.

S.V. 389—Quantity Surveyor Grade I.
Salary £900 × £35—£1,200. Candidates should be Corporate Members of the R.I.C.S. with considerable experience.

The grade and point of entry into the above salary scales will depend on the qualifications and experience of the applicant.

The architectural work of the Department covers the design of Colliery Surface Buildings of all types required in the Division, including Workshops, Stores, Power Plants, Offices, Pithead Baths, Canteens, Medical Centres, Institutes and Recreation Buildings.

Applications, stating age, education, qualifications, present appointment and salary should be submitted within 14 days of publication to:—

The Secretary,
National Coal Board,
East Midlands Division,
Sherwood Lodge,
Arnold,
Notts.

Envelopes and applications should be marked with the appropriate S.V. reference number. Original testimonials should not be sent. [8996

ARCHITECTURAL DRAUGHTSMAN required for Research Laboratory in PLEASANT RURAL SURROUNDINGS NEAR READING.

Salary in accordance with qualifications and experience. 5-day week. Pension scheme. Apply in writing with full particulars of training and experience to Personnel Officer,

ASSOCIATED ELECTRICAL INDUSTRIES, LTD., RESEARCH LABORATORY,
Aldermaston Court, Aldermaston, Berks.
[9035

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD.

APPOINTMENT OF ARCHITECTS.

APPLICATIONS are invited from Architects in practice with suitable experience for the following major schemes of hospital development on which the Board wish building to commence within the next two to three years:—

1. Hillingdon Hospital, Uxbridge, Middlesex—150 beds and ancillary departments for a new 800-bedded Hospital.

2. Slough, Bucks—New hospital of 300 beds.

3. Royal Northern Hospital, Holloway Road, N.7—out-patient department, 30 beds and other services.

Applicants should give some details of the hospital and other work undertaken by them in recent years, and it is essential that they should be in a position to carry out the work within the period stated.

Applications should be submitted to the undersigned by not later than the 30th April, 1955.

A. J. BENNETT,
Secretary,
North West Metropolitan Regional Hospital Board,
11a, Portland Place, W.1.
[9052

APPOINTMENTS—contd.

BOROUGH OF WORTHING.

BOROUGH ENGINEER'S DEPARTMENT.

ASSISTANT QUANTITY SURVEYOR.

APPLICATIONS are invited for the above appointment at a salary in accordance with Grade A.P.T. II of the National Joint Council's Scale of Salaries, i.e. £560-£640 per annum.

Applicants should have passed the Intermediate Examination of the Royal Institution of Chartered Surveyors, Sub-Section 3, and must be capable of and had experience in abstracting and building and measurement of works on site. Experience of taking off and in the settlement of final accounts would be an advantage.

The appointment will be subject to the National Scheme and Conditions of Service of Local Government Officers; to the Local Government Superannuation Act, 1953 and Local Government Superannuation (Benefits) Regulations 1954; and to the successful applicant passing satisfactorily a medical examination. The appointment will be terminable by one month's notice on either side.

The Council will assist in finding housing accommodation for the successful applicant if required.

Applications endorsed "Assistant Quantity Surveyor" stating age, status, qualifications, experience, present and past appointments with duties, and accompanied by copies of two testimonials, should be sent to the Borough Engineer, Town Hall, Worthing, not later than Friday, April 22nd, 1955.

ERNEST G. TOWNSEND,
Town Clerk.

Town Hall,
Worthing.
24.3.55. [8994

THE NUFFIELD FOUNDATION.

RESEARCH FELLOWSHIP IN ARCHITECTURE.

THE NUFFIELD FOUNDATION invites applications for a Fellowship tenable for 2 years at the Foundation's Division for Architectural Studies in London. The holder of the Fellowship will be expected to take part in the Division's programme of research, which at present covers hospitals, laboratories and agricultural buildings. The stipend attaching to the Fellowship will be within the range of £600 to £750 per annum.

The Fellowship is open to men and women who are citizens of the United Kingdom and who have completed a course qualifying them for registration as architects. Applicants should have gained some practical experience after qualifying. Evidence of experience in research and the intention to engage subsequently in research or teaching will be an advantage.

Applications must be received not later than May 1st, 1955. Full details and application forms are obtainable from The Director, The Nuffield Foundation, Nuffield Lodge, Regent's Park, London, N.W.1.

L. FARRER-BROWN,
Director of the Nuffield Foundation.
[9022

GEORGE WIMPEY & CO., LIMITED.

THE Architects' Department seek architectural staff enthusiastic to apply their knowledge to new construction techniques covering Houses, Multi-Storey Flats, Offices, Schools and Industrial Buildings for contracts in the U.K. and Overseas.

Appointments range from Architects to Draughtsmen with special interest to those of ability, recognising the value of the designer and technician as an integral part of the production team.

Appointments are on a permanent basis, 5 days a week at Head Office, Hammersmith.

Salaries will be according to qualifications and experience, and, subject to satisfactory service, there is a Pension Scheme for those wishing to make a career with the firm.

Applicants should write giving brief particulars to E. V. Collins, A.R.I.B.A., Chief Architect, George Wimpey & Co., Ltd., 27, Hammersmith Grove, London, W.6. [9018

SOUTH EASTERN ELECTRICITY BOARD.

ARCHITECTURAL ASSISTANT—SURVEYOR'S SECTION, HEADQUARTERS.

SALARY £645-£720 under N.J.C. Grade 4. Superannuable. Applicants must be competent draughtsmen, capable of preparing specifications and drawings for all types of buildings and carrying out site surveys. Applicants should preferably be members of the R.I.B.A. or the I.A.A.S., and should state age and particulars of present and previous appointments.

Applications, naming 2 referees, to The Surveyor, Seeboard, 10, Queen's Gdns., Hove, 3, by April 30th, 1955.

A. L. BURNELL,
Secretary.
[9023

APPOINTMENTS—contd.

SHEFFIELD REGIONAL HOSPITAL BOARD.

APPLICATIONS are invited for the whole-time post of SENIOR ASSISTANT ARCHITECT. Salary scale £900 × £30—£1,050. Candidates must be Registered Architects and should be capable of taking charge of a block of work in the architectural department and of undertaking personally the more difficult and responsible individual projects. The appointment is subject to the Whitley Council terms and conditions of service, to the National Health Service (Superannuation) Regulations, and to one month's notice on either side. Applications, together with the names of three referees, should be sent by April 30 to the Secretary to the Board, Fulwood House, Old Fulwood Road, Sheffield, 10. [9027

CITY OF LONDON.

APPLICATIONS are invited from Members of the Royal Institute of British Architects for the new whole-time appointment of CITY ARCHITECT at a salary between £3,250 and £3,500 per annum according to qualifications and experience. The City Architect will advise on the exercise of planning powers in the reconstruction and redevelopment of the City of London, and be in charge of all architectural services of the Corporation. Full particulars of the office and forms of application from E. H. Nichols, Town Clerk, 55-61, Moorgate, London, E.C.2: completed applications to be returned by May 9. [9025

WARRINGTON RURAL DISTRICT COUNCIL.

ARCHITECTURAL ASSISTANT.

APPLICATIONS are invited for the position of ARCHITECTURAL ASSISTANT in the department of the Engineer and Surveyor at a salary in accordance with Grade III of the National Joint Council Scales.

Applicants should have experience in the design and detailing of houses, shops and other small public buildings.

The appointment will be subject to the Local Government Superannuation Acts, to the provisions of the National Scheme of Conditions of Service and to the successful applicant passing a medical examination satisfactorily.

Applications, suitably endorsed and enclosing one recent testimonial and the names and addresses of two referees, should be received by Mr. S. C. Oxley, A.M.I.C.E., Engineer and Surveyor to the Council, on or before 25th April, 1955.

Council Offices,
Museum Street,
Warrington.
April 4, 1955.

H. A. MORTIMORE,
Clerk of the Council.
[9026

RICKMANSWORTH URBAN DISTRICT COUNCIL.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

APPLICATIONS are invited for the above permanent appointment in the Engineer and Surveyor's Department. Salary Grade A.P.T. II (£560—£640). Applicants must be experienced in the preparation of plans and specifications with particular reference to the design of Council Houses. Applicants must state whether they wish the Council to provide housing accommodation and any such request will be considered. Applications endorsed "Architectural Assistant," giving the names and addresses of two referees, to be delivered to the undersigned not later than Wednesday, April 20, 1955.

C. R. RANSOME WILLIAMS,
Clerk of the Council.

Council Offices,
Rickmansworth,
Herts.
March 29, 1955. [9005

CITY OF BIRMINGHAM.

CITY ARCHITECT'S DEPARTMENT.

APPLICATIONS are invited for appointments as Architectural Assistants on the Special Classes Scale, £650/£775 per annum, for duties in connection with either Schools or General Civic Buildings. Commencing salary will be according to capabilities and experience.

Applicants must have passed Parts I and II of the Final R.I.B.A. Examination, or hold an equivalent qualification.

The posts are permanent, superannuable, subject to a medical examination, and to one month's notice on either side.

Applications, stating age, present position and salary, qualifications and experience, and type of work preferred, together with the names of two persons to whom reference can be made, should reach the undersigned by not later than 30th April, 1955.

Canvassing disqualifies.

A. G. SHEPPARD FIDLER,
City Architect.
Civic Centre, Birmingham, 1. [9041

APPOINTMENTS—contd.

LONDON COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

VACANCIES for ARCHITECTS, Grade III (up to £892 10s), with experience in working drawings and specifications for alterations, adaptations and improvements.

Particulars and application forms, returnable by 4th May, from Architect (AR/EK/M/4), The County Hall, S.E.1. (473.) [9053

CITY OF BIRMINGHAM.

CITY ARCHITECT'S DEPARTMENT

APPLICATIONS are invited for the following appointments:—

(a) Quantity Surveyor—Grade APT. IV (£675-£825 per annum).
(b) Assistant Quantity Surveyor—Grade APT. III (£600-£725 per annum).
(c) Assistant Quantity Surveyor—Grade APT. II (£560-£640 per annum).
(d) Assistant Quantity Surveyor—Grade APT. I (£500-£580 per annum).

Applicants for Grade APT. IV must have passed the Final Examination, and for Grades APT. I, II and III the Intermediate Examination, of the R.I.C.S. (Quantity Section), or hold equivalent qualifications. The commencing salary in any grade will be according to capabilities and experience.

The posts are permanent, superannuable, subject to a medical examination and to one month's notice on either side.

Applications, endorsed with the heading of the post, stating age, present position and salary, qualifications and experience, together with the names of two persons to whom reference can be made, should reach the undersigned not later than 30th April, 1955.

Canvassing disqualifies.

A. G. SHEPPARD FIDLER,
City Architect.
Civic Centre, Birmingham, 1. [9042

TENDERS

COUNTY BOROUGH OF BRIGHTON.

TENDERS are invited for:—
RECONSTRUCTION OF UPPER BEVENDEAN FARM.

Bills of Quantities and forms of tender may be obtained from the Borough Engineer & Surveyor, 26/30, King's Road, Brighton, on or after Friday, 22nd April, 1955, on receipt of a returnable deposit of £2 2s.

Tenders are to be delivered to the Town Clerk in plain sealed envelopes not later than 12 noon on Monday, 30th May, 1955.

W. O. DODD,
Town Clerk.
[9033

MISCELLANEOUS SECTION

RATE: 1/6d. per line, minimum 3/-, average line 6 words. Each paragraph charged separately.
BOX NOS. add 2 words plus 1/- for registration and forwarding replies which should be addressed c/o, "The Architect & Building News," Dorset House, Stamford Street, London, S.E.1.
PRESS DAY Monday. Remittances payable to Iliffe & Sons Ltd., Dorset House, Stamford Street, London, S.E.1.
No responsibility accepted for errors.

ARCHITECTURAL APPOINTMENTS VACANT

The engagement of persons answering these advertisements must be made through the local office of the Ministry of Labour and National Service, etc., if the applicant is a man aged 18-64 or a woman aged 18-59 inclusive, unless he or she or the employer is excepted from the provisions of The Notification of Vacancies Order, 1952.

EDWARD D. MILLS requires assistant Inter. standard; interest in contemporary design essential.—Apply 15, Carlisle St., Soho Sq., London, W.1. [9044

MINOPRIO & SPENCELY & P. W. MACFARLANE need experienced Architectural Assistant, salary £750 to £850, for London office.—Write 18, Seymour Street, W.1. [8959

ARCHITECTURAL APPOINTMENTS VACANT—contd.

ADAMS, HOLDEN & PEARSON require senior and junior architectural assistants immediately.—Write, giving particulars of experience and salary required, to 38, Gordon Square, W.C.1. [8901

SENIOR architectural assistant required, R.I.B.A. Final Standard, for varied London practice.—Write giving particulars of age, experience, salary required, etc., Box 3094, c/o A. & B.N. [9019

ARCHITECT'S Assistants required (1 senior and 2 juniors) for West End office.—Write stating full particulars and salary required to Box 2085, c/o A. & B.N. [8819

JUNIOR and intermediate architectural assistants required urgently in London office with widely varied practice; good salaries; 5-day week.—Lewis Solomon, Son & Joseph, Hol. 5108 or 7082. [0938

CLIFFORD CULPIN & PARTNER require an additional Assistant. Salary £650 to £750 according to experience. Full Summer holiday.—Apply in writing to 3, Southampton Place, W.C.1. [9024

NORTH country brewery has opening for young and enterprising qualified architect.—Write, stating age, experience and initial salary required, to Box A.N.261, c/o 191, Gresham House, E.C.2. [9037

ARCHITECTURAL Assistants urgently required up to Intermediate Standard and preferably with office experience. State salary required.—Fowler, Grove & Haggar, 140, Lodge Rd., Southampton. [8984

INTERMEDIATE Architectural Assistant required in Central London Office, experience of shops and shopfitting an asset.—Write Box 3095, c/o A. & B.N., stating age, experience and salary required. [9020

SENIOR and Intermediate Architectural Assistants required. 5-day week. Write or telephone, giving full particulars, including age and salary, to Hasker & Hall, Architects, 13, Welbeck Street, W.1. (Welbeck 0061.) [0697

ARCHITECTURAL Assistant required of R.I.B.A. Intermediate or Final standard.—Give details of qualifications, age, experience and salary required to: R & D. Hall, Architects, Masonic Buildings, Bangor, N. Wales. [9039

ARCHITECTURAL Assistants required, varied work, salaries £700 to £750; write, stating age, training, experience, present salary; all interview expenses paid.—G. de C. Fraser Son, & Gearey, Chartered Architects, 27, Dale St., Liverpool. [8989

HELLBERG & HARRIS F/A.R.I.B.A., require senior assistant for school, industrial and commercial work.—Apply stating experience and salary required to 13, Queen Victoria Rd., Coventry. Tel. 40521-3. [9021

A VACANCY occurs for a young architect with sound experience in construction to develop systems applicable to multi-storey building; the position will be in London and a good salary will be paid to suitable applicant.—Apply Box 3146, c/o A. & B.N. [9043

SURVEYOR of Intermediate standard with experience of quantities and surveying of buildings, etc., required by large engineering firm in North-West London area; salary £550-£600.—Write Box 2E.R5993, A.K. Advg., 212a, Shaftesbury Ave., London, W.C.2. [9047

ARCHITECTURAL Assistants of Final and Intermediate standard required for Bristol Office. Varied and interesting work; good salary; contributory pension scheme.—Write, giving age, experience and salary, to W. H. Watkins, Grey, FF.R.I.B.A., and Partners, 1, Clare St., Bristol, 1. [9040

ARCHITECTURAL APPOINTMENTS VACANT—contd.

SAMUEL MORRISON & PARTNERS require assistant architects of Intermediate and Final standard, with or without experience; work includes interesting contemporary schools, factories, shops and houses in various parts of the country, industrial design and the development of prefabricated structures; salaries comparable to Local Authority scales; interview expenses paid; good office accommodation in pleasant surroundings.—St. Alkmund's House, Belper Rd., Derby. [9002

WANTED: Architects with experience or who want to gain experience in modern hospital work.

Three vacancies with salaries £600—£900 p.a. plus bonus—according to experience and ability. Write for appointments only if possessing keenness and initiative and two years' experience.

These vacancies are suitable to the type of man wanting to work in a small office (staff about 14) where there is freedom, but a high standard of individual responsibility encouraged.—Box 3128, c/o "A. & B.N." [9029

IMPERIAL CHEMICAL INDUSTRIES, Ltd., has a vacancy for an architectural assistant to work in their London offices; candidates should be associate members of the R.I.B.A. between the age of 25-35 and should have a thorough knowledge of architectural works, particularly in regard to the design and construction of offices, canteens, laboratories, housing and warehouses.—Applications, stating age, qualifications and experience, should be sent to Head Office & Regions Staff Dept. (GDC), Imperial Chemical Industries, Ltd., I.C. House, Millbank, S.W.1. [9046

SITUATIONS VACANT

The engagement of persons answering these advertisements must be made through the local office of the Ministry of Labour and National Service, etc., if the applicant is a man aged 18-64 or a woman aged 18-59 inclusive, unless he or she or the employer is excepted from the provisions of The Notification of Vacancies Order, 1952.

SHORTHAND-TYPIST required, architect's office. West End; 5-day week.—Apply Box 2985, c/o A. & B.N. [8999

SHOPFITTING Setter Out required, used to metalwork.—Morris-Singer Co., Ferry Lane Works, Forest Rd., E.17. [9048

ARCHITECTURAL Metalwork Designer wanted. Top rates paid.—Write Box No. 340, W.B.G., 39, Cheapside, London, E.C.2. [9050

EXPERIENCED Purpose-made Metal Window Draughtsman required. Top rate to right man. N.E. London.—Write Box No 339, W.B.G., 39, Cheapside, London, E.C.2. [9049

ASSISTANT required in busy practice in West End, in early '20s, about Intermediate R.I.B.A. standard; excellent opportunities of gaining all-round experience.—Box 0672, c/o A. & B.N. [0636

COURSES for all R.I.B.A. EXAMS

Postal tuition in History, Testimonies, Design, Calculations, Materials, Construction, Structures, Hygiene, Specifications, Professional Practice, etc. Also in general educational subjects.

ELLIS SCHOOL OF ARCHITECTURE

Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A.
1930 OLD BROMPTON ROAD, LONDON, S.W.7
Phone: KEN. 4477 and at Worcester

SITUATIONS VACANT—contd.

SANITARY engineer required by London Architects for the design of plumbing and drainage schemes to multi-storey flats, office buildings and factories, knowledge of heating desirable; salary by arrangement.—Write Box 3093, c/o A. & B.N. [9017

CLERK of Works required of good general experience, particularly maintenance; must have initiative.—Applications, stating age, experience and salary required, to Chief Architect, The Granada Theatres, Ltd., 36, Golden Sq., London, W.1. [9036

ASSISTANT required with sound knowledge of construction; interest in good design, capable draughtsman; for varied interesting industrial and commercial projects. "Contemporary" outlook. Office experience essential. Salary £600-£750 p.a.—David Stern, 24, Gloucester Place, W.1. Hun. 0451. [9045

DRAUGHTSMAN with knowledge of architectural and/or design and interior decoration for shopfitting work of specialist character dealing primarily with interior layouts; progressive and interesting opportunity for man age 21-30; salary commensurate with experience and knowledge.—Apply Henry Serventi, Ltd., 61-3, Beak St., London, W.1. Gerrard 7414. [9032

SERVICES OFFERED

MODELS, houses, factories, estates, etc.—Consult M.T.S., 60, Kenyon St., Birmingham, 18. [9038

PHOTOGRAPHY—architectural and commercial, highest quality, lowest prices.—B. W. C., 15, Homersham Rd., Kingston-upon-Thames. [9016

FOR SALE

FISH HILL QUARRIES, Fish Hill, near Broadway, Worcs.

COTSWOLD BLOCK STONE suitable for dressing. Small samples can be sent on application to:
BAILLIE, BRIND & CO., LTD.,
Prudential Chambers, Banbury, Oxon. [9014

DECORATIONS, spray painting specialists, modern plastic surfaces, paints emulsion, etc.—Stratford Condren, 300, Wickham Lane, S.E.2. Woolwich 4578. [9015

JOINTLESS composition flooring in attractive colour range—quotations free.—Full particulars from the Liotex Asbestos Flooring Co., Ltd., 3, Corbetts Passage, London, S.E.16 (Dept. A). Bermondsey 4341-2-3. [0622

ALL hardwood mouldings, plain and embossed, embossed ornaments and dowels; send for catalogue and to-day's lowest trade prices.—Dareve's Moulding Mills, Ltd., 60, Pownall Road, Dalston, E.8. Clissold 1543/4. [0142

NEW Cast-iron Gutters and Pipes in stock at stores, Hanwell, London, W.7. Moulded, O.G., H.Rd., Box, Boundary Wall, Valley Gutters made from 4in to 30in wide, R.W. Pipes, 2, 2½, 3, 3½, 4 and 6in.—Hills Bros. (Est. 1932), 49, Queen Victoria St., London, E.C.4. (City 3094.) [8990

MISCELLANEOUS

FOR tree felling, root-blasting, site clearing, etc., contact F. G. Fleming & Co., New Rd., Northchurch, Herts. Tel. Berkhamsted 1239. [9014

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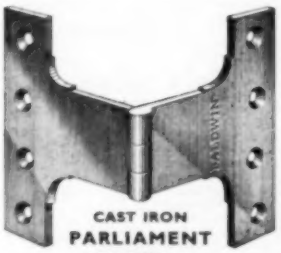

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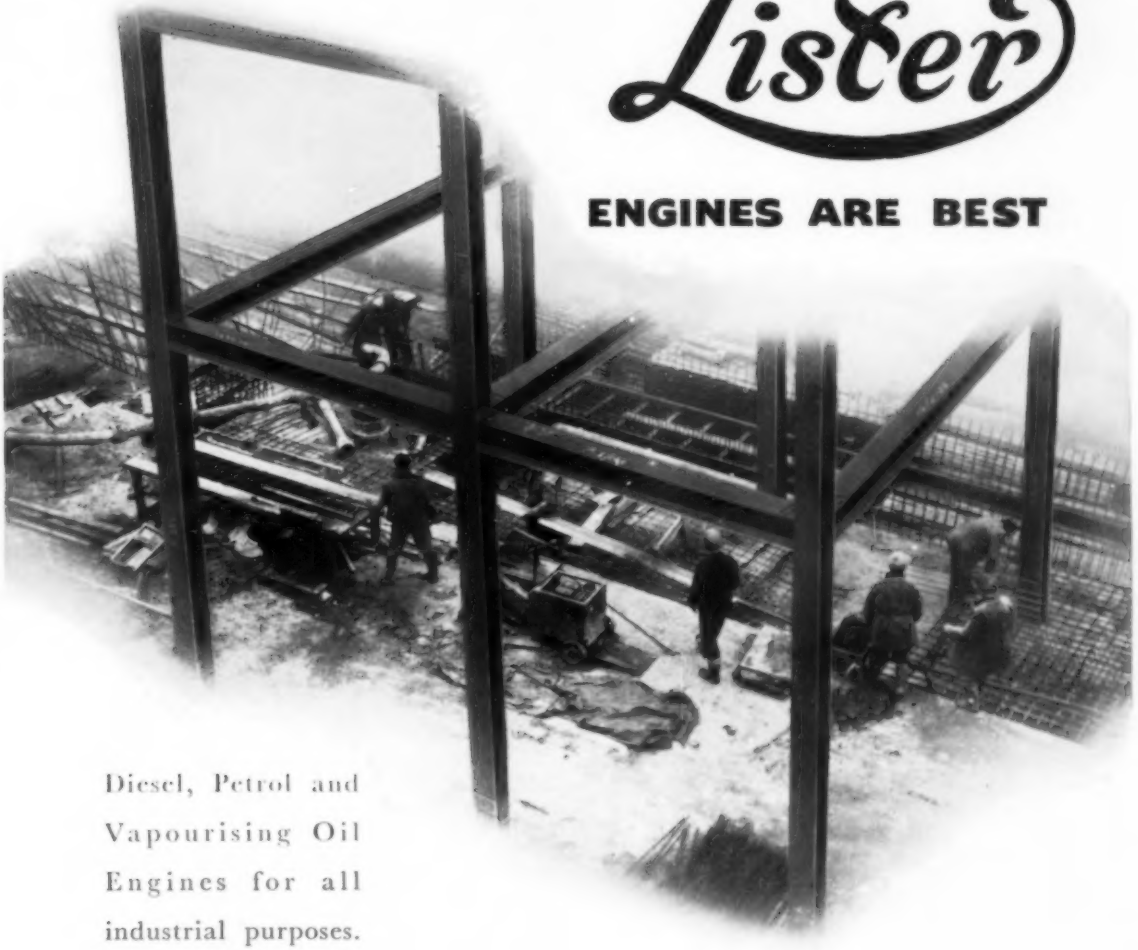

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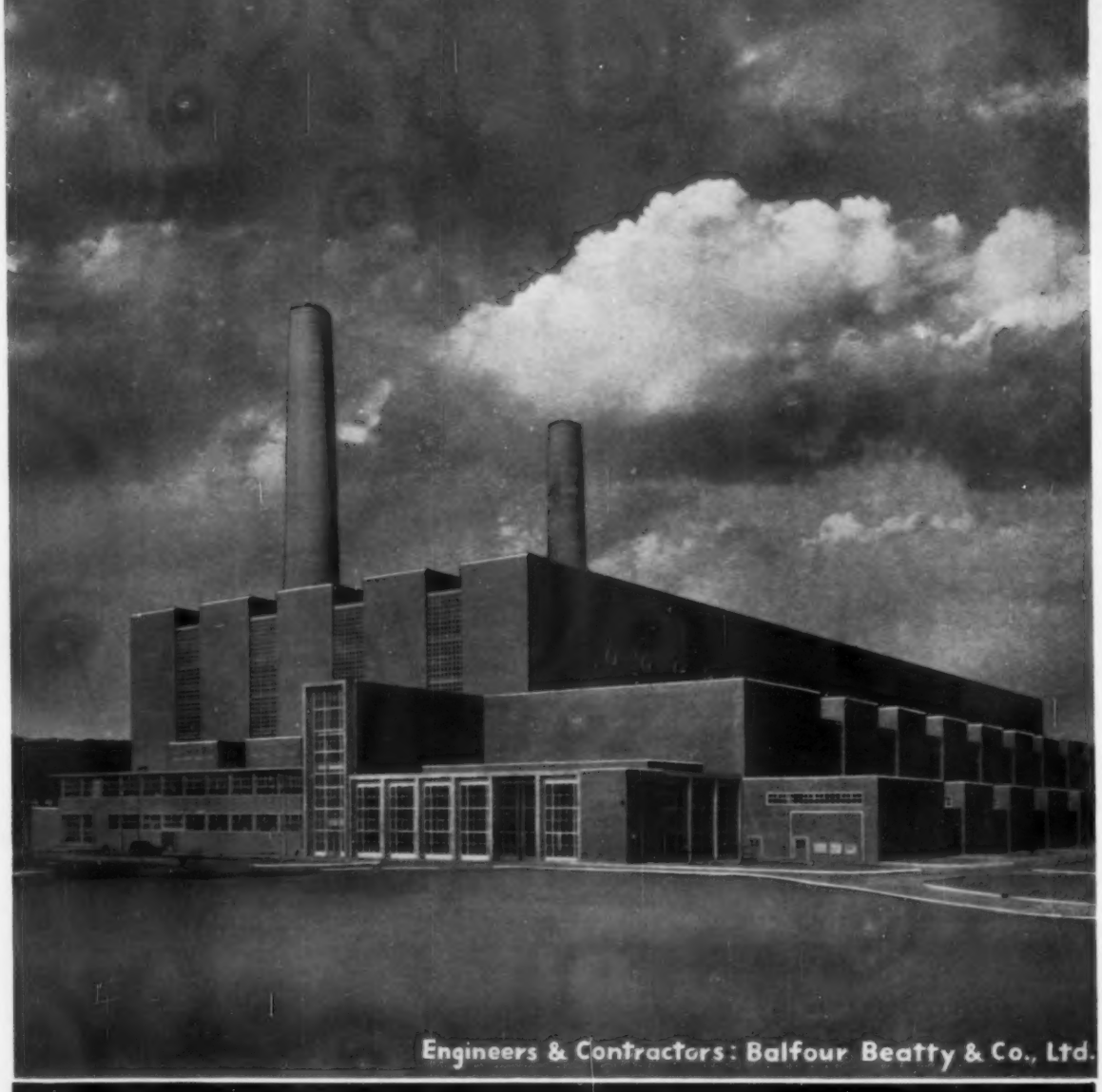

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